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A Painted Buffalo Robe of the Plains Indians

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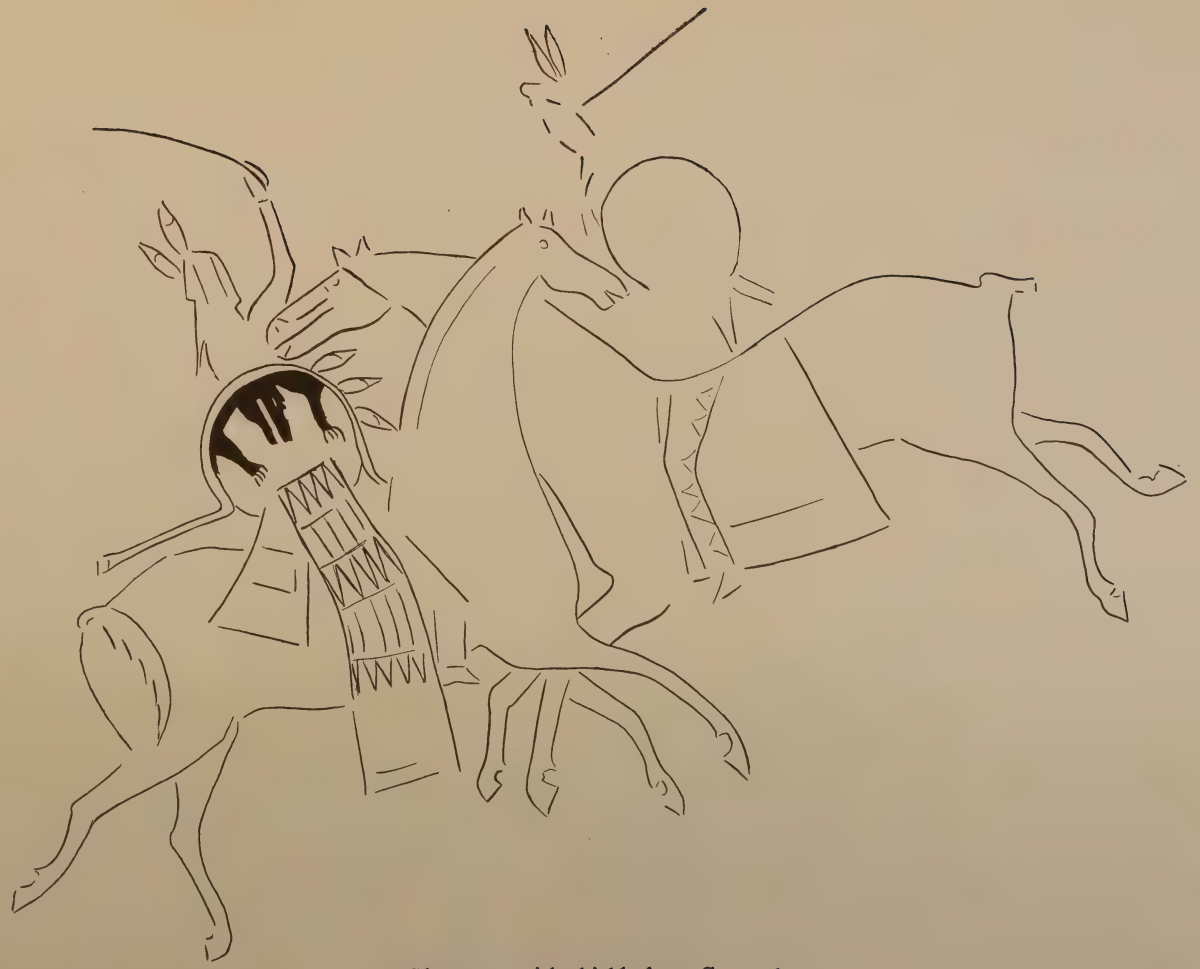

Horsemen with shields from Group 1.

THE
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A BUFFALO ROBE BIOGRAPHY

By H. U. Hall

THE Museum has lately acquired a painted buffalo robe of that interesting class which provides pictorial records of the war-like activities of the tribes of the upper Missouri valley at a time when the prairies were still open to their war parties and bands of buffalo hunters. Considering the age of this record of a vanished time and a vanishing people, the state of preservation in which it has reached us is remarkable enough. One of the painted episodes with which the surface is covered has been partially obliterated by a rent which has removed a portion of it; that part of the hide which has been torn away in the region of the head of the buffalo which provided the skin probably contained no painted figures.

Robes decorated with realistic drawings of this kind fall into three chief classes: time counts or calendars in which remarkable events of successive seasons, winter or summer, were represented in a series of drawings by which the succession of these periods was marked for the remembrance of posterity in a particular tribe or group; personal records, or biographies, commonly autobiographies, since it was usually his own exploits that a warrior set down in the graphic texts of which the robe here figured is a fine example; and the imaginative records of visions.

The time count was by its nature the chronicle, though of course only a partial one, of a group of people. That this robe does not belong to that class is evident from the appearance in a majority, if not certainly in all, of the incidents pictured upon it, of the same principal figure, who is shown as the victor in most or all of the series of combats represented. Again, the record has a character too extensive and too circumstantially detailed to permit its being regarded as the transcript of a vision. It is thus evidently of the nature of a biography.

The painting of such records on robes, scalp shirts, and tipis was undoubtedly associated with a custom according to which warriors recited before the council an account of the deeds in battle or raid which would entitle them to special consideration or standing among their fellows. If a man had taken part, as in the case before us, in more than twenty battles or raids, he might well require some aid to memory in recounting his exploits. When his record was challenged and he made oath to its authenticity, he could weight the

Horseman with Shield from Group 3.

authority of his pledge by pointing to the graphic representation on his robe or shirt of the incident in question. It is not only in sophisticated societies that the written or pictured word remains in the mind as in itself a proof of the credibility of artist or writer.

Among most Plains tribes, the buffalo robe was the only covering in ordinary use for the upper part of the body, so far as the men were concerned. The scalp shirt, or honour shirt, with its fringe of locks from the scalps taken in war, was, at any rate in early times,

worn only on certain ceremonial occasions. The buffalo robe not only served to keep the body warm in winter, but had also a number of ceremonial or ritual uses. In an Arikara medicine ceremony, the leader of the office stood on a buffalo robe to pray. Among the Teton Dakota, it was worn ceremonially at marriages; a robe painted red formed one of the offerings at the ceremony of the Vision Cry; the faster in this ceremony of consecration donned such a robe after

From Group 4.

his sojourn in the sweating tent; it was a part of the prescribed costume at the sun dance. Similar use was made of buffalo robes among other tribes who were neighbours of the Dakota: at the Mandan ceremony known as okipe, buffalo robes were hung from slits cut in the flesh of the fasters who were suspended from the roof of the lodge by means of skewers run through other slits in the upper part of the back. The dead were laid out upon or buried in their

buffalo robes among the Arikara, Hidatsa, Blackfoot, and Teton Dakota. The robes were worn at ritual dances to simulate the appearance of the animal from which they were derived.[1]

Robes from which, like the one before us, the hair has been removed are said to have been principally for summer wear. Robes on which the hair had been retained were worn with the hairy side in in cold weather. On an occasion when the display of the decoration, realistic, as in the present instance, mainly, or, as in the case of the majority of robes, conventionalized and symbolic or merely ornamental, was the prime object for the wearing of the robe the contact of the heavy hair with the skin of the wearer would have to be endured in hot weather, failing the possession of a decorated hairless robe. On account of the lighter and softer nature of the skin, robes were usually made from the hide of the buffalo cow.[2]

All the evidence derivable from the appearance of this robe, which is all the evidence we have, points to a more than merely respectable age. It was evidently carefully preserved during a large part of its existence before it came into the possession of the Museum. This may be seen from the clearness with which most of the pictures still show their details and colour. Age has transformed the inner surface of the hide, on which the pictures are painted, so that in several places it exhibits under a fairly strong glass a texture which can best be described as woolly. It was only after it had reached the condition of fragility this implies that the dilapidations ensued which can be clearly seen in a few places, and which are evidently due to somewhat recent carelessness. The costumes worn by a few of the painted figures are of some assistance in attempting to ascertain the age of the robe, though they do not warrant the assigning of a definite date. The long skirted uniform coats of several of the mounted figures, with high straight collar and without lapels, with pocket flaps placed low down in the almost flowing skirts, have a decided eighteenth century complexion. On the other hand, coats presented or traded to Indian chiefs would naturally long continue to follow a fashion rather early established for such things; yet these coats have a more antiquated appearance than the somewhat similar garment represented on a painted robe figured in the Atlas to Maximilian of Wied's Travels into the Interior

[1] Curtis, The American Indian, III, 19, 20, 65, 68, 89, 95 ff.; IV, 185; V, 63, 72, passim; Maximilian of Wied-Neuwied in R. G. Thwaites' Early Western Travels, XXIII, 121; etc.

[2] Thwaites (Maximilian), XXIII, 109; but see Catlin, The North American Indians, London, 1841, I, pp. 147 and 148.

of North America, the drawings for which were made during the years 1832–1834. The cut of the coat worn by the mounted warrior in the middle of the second row above the quillwork stripe is of a more modern fashion, though its outlines are not clearly enough defined to allow of the drawing of any exact inference as to its date; but it may be recalled that tail coats of a cut resembling the now obsolescent frock coat with a tendency towards the swallowtail effect of the modern dress coat were worn with loose "pantalons à l'anglaise" at the beginning of the last century, a date which may not be much, if at all, too early to assign to this buffalo robe. The quillwork stripe was, with its foundation of hide, stitched with sinew on to the robe after the completion of the painted decoration of the latter. This is evident from the covering up at several points of small portions of the pictures by the applied decoration. The noticeably lighter shade of the part of the surface which is thus covered indicates that the robe was not old when the stripe was applied. But the quillwork itself is old, and we learn from Maximilian that the application to a buffalo robe of a quillwork stripe was already becoming oldfashioned at the beginning of the third decade of the last century.[1]

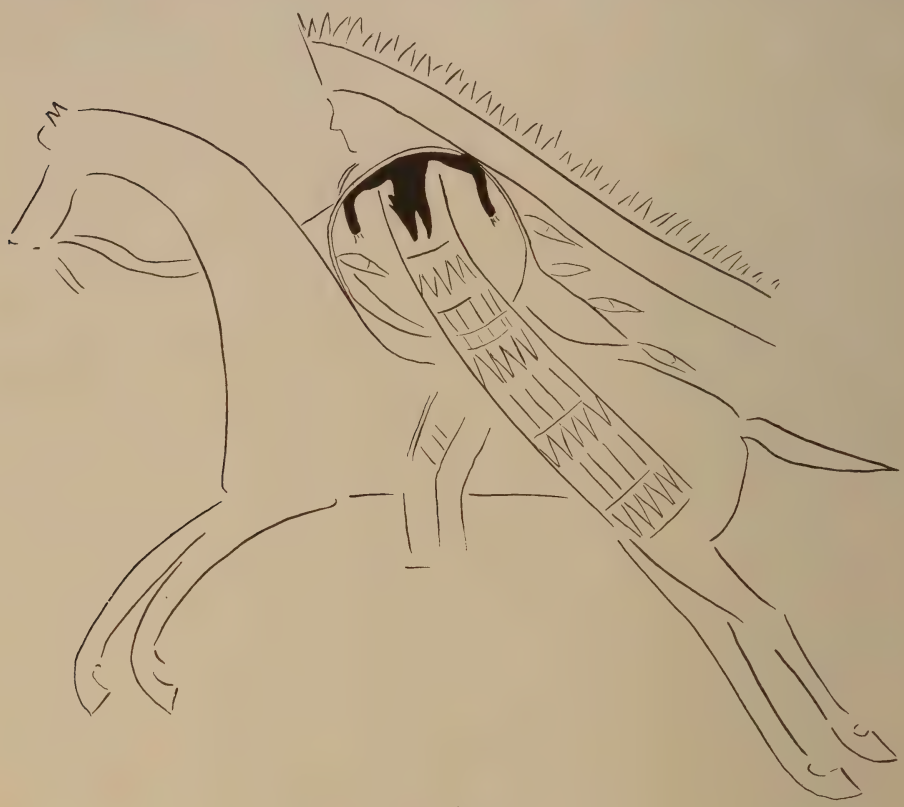
This decoration is applied to a strip of buffalo hide which has been cut to conform to the quillwork stripe and stitched to the robe with stout thread made of buffalo sinew. The pattern is formed in quills spliced together at their ends and carried in bands of close flat spirals over two parallel lines of sinew thread which are attached to the hide by what Orchard[2] calls a spot stitch. This means that the thread is passed at intervals into the thickness of the hide, not through it but parallel to the surface, to reappear at an interval considerably shorter than the portion left free. It is very tightly stretched and has held the quills securely in position; the gaps which have made their appearance here and there are not due to the parting of the sinew threads but to the breaking away, through rough usage, of the quills themselves. Each spiral band is separate and distinct; they are arranged in concentric circles for the discs and in parallel rows for the rest of the decoration, except on the flaps which represent the ears of the buffalo and which are covered with concentric half-ellipses carried out in the same manner. The small rosettes in the

[1] Thwaites, XXIII, 260.

[2] The Technique of Porcupine-Quill Decoration, Contributions from the Museum of the American Indian, Vol. IV, No. 1.

centre of the discs, both of the large ones on the longitudinal strips and of the smaller ones representing the eyes of the beast, are constructed of a sort of twoway spiral, in which each turn overlaps the next. The small central edge is strung on a thread which is fastened to the hide at one point only, being free in the rest of the small circumference.

Besides the quillwork stripe down the middle of the robe, this decoration, as we have seen, is applied to the ears of the buffalo,

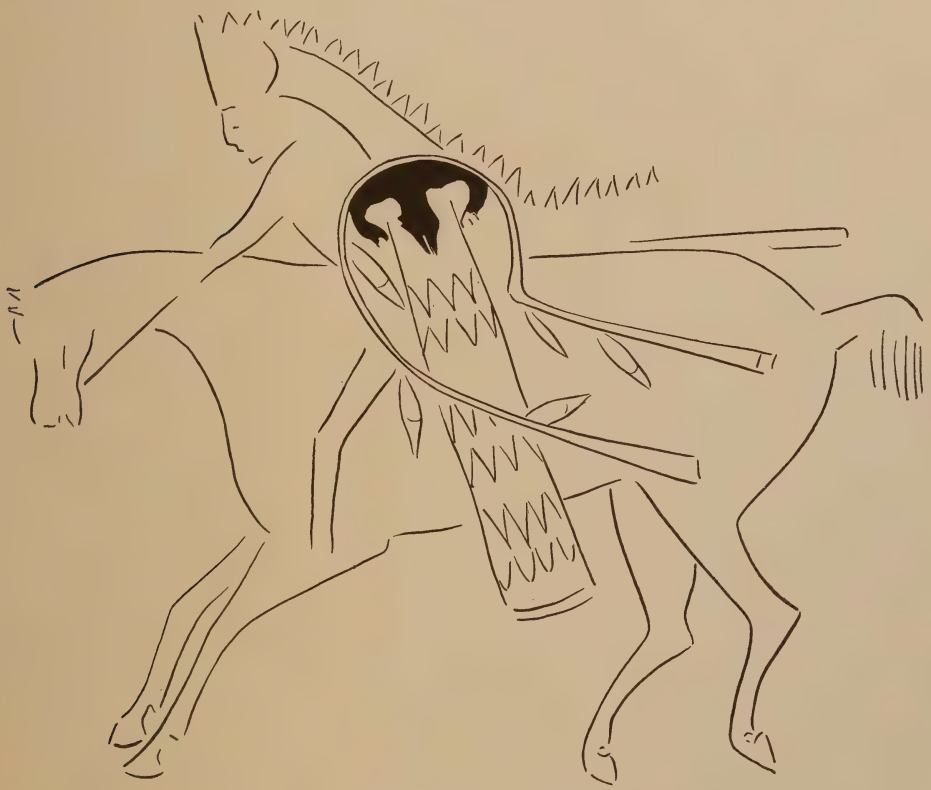


From Group 5.

while two small discs of concentric circles represent its eyes. Conformably with the importance of this beast in the daily life of the Plains Indians, with the consequent mimetic representation of the animal in their ceremonies, and with the ceremonial use of robes made from buffalo skins, the origin of the hide used for making the robe is thus emphasized and preserved.

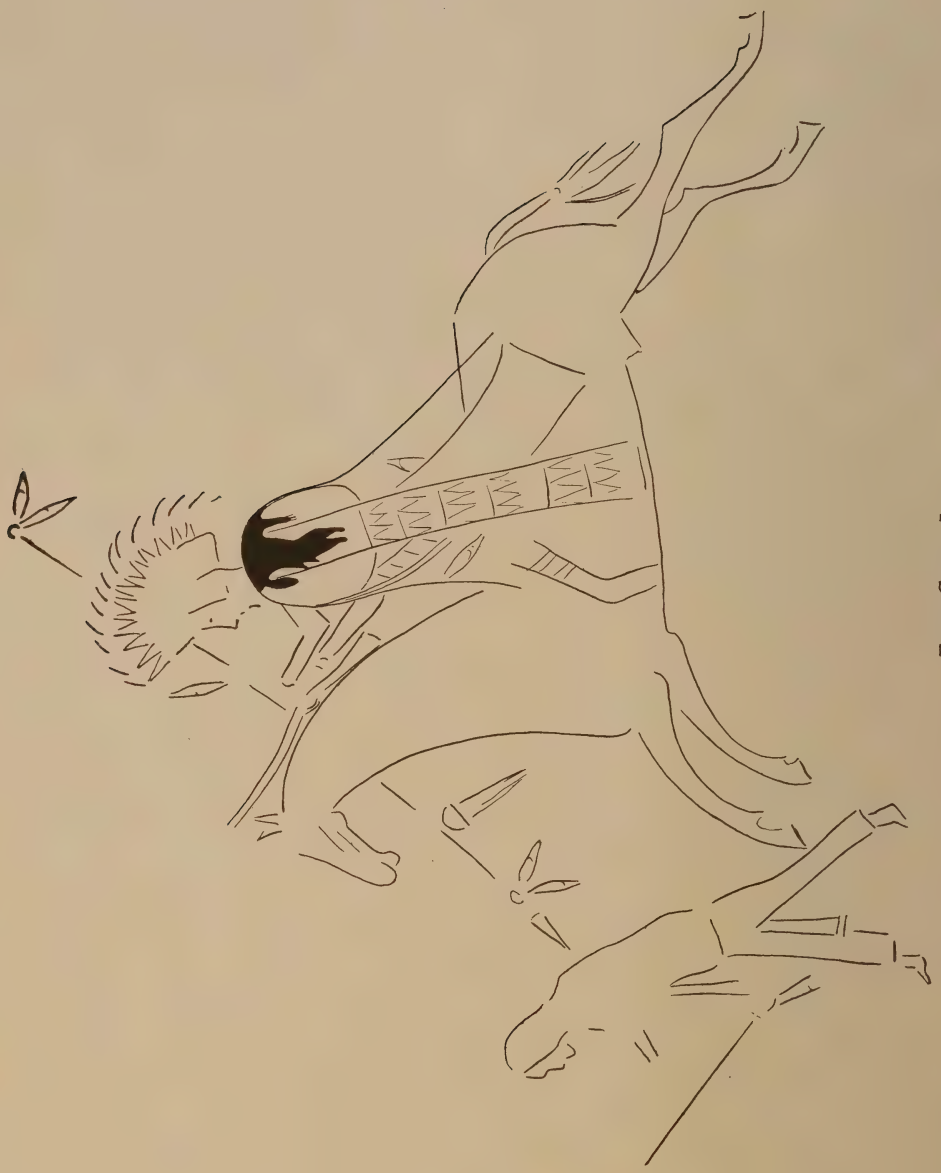
The use of quills dyed in two different colours, red and blue, together with undyed quills gives the design. In the case of the disc, this consists chiefly of two red sectors of a circle, truncated

towards the centre of the latter, with their apices opposed. From each side of these triangular figures project two short blue arcs, the one nearer to the centre of the disc shorter than the other; and from the point where the longer arc ceases, a still longer broken line which is made up of short blue bars whose vertical length is determined by the width of the next outer concentric band, the curve of which it occupies, connects the ends of the two longer of the four short blue arcs. The ground of the whole is in the natural white of the quills.



From Group 6.

Except in the absence of a head, and in the two chequered curves at the sides, which appear to be supernumerary to the main design, this bears a suggestive resemblance to a somewhat conventionalized mode common to the tribes of the Plains area of representing the eagle, the raven, or the mythological thunderbird with a triangle for the body and another, with apex opposed to the first, for the outspread tail. The two triangles form an hourglass figure with two branches extending horizontally from the upper border of the broad upper portion, for the wings, and two shorter branches, parallel



From Group 7.

to those extending from the waist of the hourglass, for the legs.[1] If the design on the disc we are considering is a further conventionalization of such a figure, representing a tutelary bird-spirit, the doubling of the parts representing wings and legs, or the balanced repetition of the upper half of the figure, as the case may be, would be a natural development. Devices regarded as magically protective appear on robes as well as on shields, cradles, tipis, etc.[2]

The disc, in quillwork, or later in beadwork, with a considerable variety in the detail of the design, occurs with great frequency in Plains Indian decoration. Whether or not it has always a symbolic meaning is uncertain. It had undoubtedly in some cases, but most of these are probably now beyond the possibility of interpretation. A design which resembles that figured here in consisting of two similarly opposed triangles within concentric bands or rings, but in which the broad part of the lower triangle projects beyond the outer ring, appears on the instep of a Sioux moccasin figured by Wissler.[3] It is said to represent the head and neck of a person. The discs appeared commonly on the flaps of cradles, were said by the Arapaho to correspond there to the same ornament which was equally common on tipi covers, and apparently represented, on the cradles, a charm which embodied and reenforced a prayer that the occupant of the cradle might live to have a tipi of his own.[4] What is perhaps a related interpretation of the significance of the disc makes it "symbolic of embryonic life" among the Dakota.[5]

Quillwork discs appeared also on shield covers, where they might repeat the simple decoration of concentric rings of different colours which often formed the only adornment of the shield itself, as in groups 1 and 2 on our pictured robe.

This form of decoration was the work of women. The porcupines which provided the quills were obtained by the men. The realistic paintings on the robes and other objects which commonly bore that form of decorative record were executed by men.

Robes usually bore the disc repeated several times on a stripe, also of quillwork, as here. It appeared also, as we have seen, on

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[1] Cf. Wissler, Bulletin of the American Museum of Natural History, XVIII, Pl. XXXIX, Fig. 4; and Kroeber, loc. cit., passim.

[2] Curtis, The American Indian, III, pp. 29, 69; Wissler, Some Protective Designs of the Dakota, Anthropological Papers of the American Museum of Natural History, I; etc.

[3] Bulletin of the American Museum of Natural History, XVIII, Pl. LII.

[4] Kroeber, loc. cit., pp. 66, 67.

[5] Curtis, The American Indian, III, p. 27.

From Group 8.

moccasins, cradles, and tipis. The latter also bore painted scenes from the owner's career, as did the scalp shirts, which, too, were frequently ornamented with the quillwork disc. In that case it appears sometimes singly in the middle of the breast, sometimes as a pair, over the breasts, sometimes on the shoulder. Women's shirts bore them in the same positions. They also occur on a quillwork stripe running down the side of the legging. In one or other or all of these positions they were to be seen among most of the tribes of the Plains.

The quillwork disc is thus not a mark by which we can distinguish the robe figured here as having belonged to a Dakota. But there are certain details of the painted figures which point to Dakota authorship of the record and ownership of the robe. These are, in the first place, the distinction made in a number of instances between the principal actor depicted and his antagonists in the painting of their faces, where these have their foreheads and he the lower part of the face painted red. The former mark is said by Mallery[1] to have been employed by Dakota painters of these records as an indication that the wearers of the mark were members of the Crow tribe; while red for the lower part of the face was a feature of Dakota face painting. In the second place, the combination of the latter mode, evidently as a means of distinction, with a certain form of hairdressing peculiar to the hero, whenever this feature can be clearly discerned, strengthens the conclusion. The coiffure referred to consists in the wearing of short side locks cut off square at the bottom, a long queue, and a forelock sometimes tied or otherwise stiffened into an erect position. This was a Dakota style of hairdressing, and these three features of the coiffure are not found combined in the case of any other figures on the robe. There is also some evidence of an attempt to distinguish between the stiffened forelock of the hero and a more erect and prominent topknot such as was worn by the Crows. Finally the execution of the painted figures, and especially of the horses, belongs to the best style of these drawings, such, namely, as were executed by the Dakota. The grace and naturalness of action of most of the chargers and their pleasing proportions, apart from the exaggeration of both length and thickness of neck in a few instances, leave little to be desired in the matter of the simplicity and vigour combined with sureness of line with which the effects are achieved.

[1] 10th Report of the Bureau of American Ethnology, p. 631. See also pp. 383, 512, 380.

From Group 10.

There are depicted on the robe twenty five, or perhaps twenty seven, distinct episodes connected with the military career of the owner. In most of these he can be identified with certainty by means of attributes which accompany the representation of a figure invariably victorious in combat or raid; in the others the conclusion is justifiable, since this is a triumphant record of success in the pursuit of military glory, that the figure of the victor is also that of the chief who always carries off the honours elsewhere in this gallery of battle pieces.

The hero and owner, probably also the author, of the record is recognizable in the first place and with the greatest degree of certainty from his shield. It bears, as his device or cognizance, a drawing in black, or the nearest approximation to that colour available for the artist, of the fore quarters of some beast, probably a bear. The animal of the shield is depicted with varying degrees of realism. The gaping jaws, as in group 5, the group at the extreme left in the second row of pictures from the bottom of the robe, or in group 8—that at the extreme right of the same row—become in groups 1 and 4, immediately below 8 and 5 respectively, a slit which practically bisects the head of the animal, seen in profile in all these cases. In some instances, on the other hand, as in groups 21 and 23, the two outer groups of the second row from the top of the robe, the head is pictured as if seen from above, the aspect which is common to all representations of the forelegs, with one exception. This occurs in the case of the group which is intermediate to the two last mentioned, where only one foreleg is shown in an attempt to depict the fore quarters and head of the beast—all that is anywhere depicted—in profile.

In what follows the groups are enumerated from right to left, beginning at the lower corner on the reader's right and proceeding horizontally to the left, then reversing the direction for the row above, and so on upwards. There are three somewhat unevenly placed horizontal rows below the stripe of quill work and four above, the topmost row containing only two groups.

The shield with the device just described is carried by the principal figure in each of the following groups—1, 3, 4, 5, 6, 7, 8, 10, 13, 14, 15, 17, 21, 22, 23, and 25. The hero appears thus unmistakably characterized sixteen times. In the case of group 12, a rent in the hide has removed the greater part of the figure of the rider and the hind quarters of his mount; but a part of the long

feather streamers of the shield is visible, and as none of the shields carried by other personages in the pictures is represented with these long streamers, it is practically certain that this figure is again that of the hero.

In group 2, where a mounted warrior has been unhorsed and apparently slain by the arrows of an unmounted bowman, the identification must remain merely probable, on the assumption that the victor is ipso facto the hero. An alternative possibility is that the overthrown brave may have been a member of the same band or society as the hero, or a kinsman, whose death at the hands of the unidentified bowman may have led to an act of revenge committed by the hero and recorded in one of the other episodes.

In group 9, where the principal figure is without a shield, he may be identified with considerable probability, apart from the general assumption that chief actor is identical with owner or hero, from the arrangement of his hair and from the streamer attached to the back of his head, which is almost identical with the one worn by the horseman at the right in group 17, the second group from the right in the second row above the quillwork stripe. The latter personage is identified as the hero by his shield. The two types of coiffure in these figures are the same. The streamer is of ermine skins tied with a band of red cloth near the lower extremity.

In group 16, three factors besides the general assumption cumulatively bring the probability of the chief character's identification close to certainty: his coiffure, which may be compared with that of the corresponding figures in groups 9 and 17, the nature of his exploit, and the way in which his face is painted. Clad only, except for a breech cloth, in a pair of red leggings, he comes up at a run and strikes his opponent over the head with a bow.[1] This was regarded among the Dakota as one of the most remarkable deeds of bravery that could be accomplished by a warrior, and it is not likely that an exploit of such a nature performed by any one else would be commemorated in a record whose principal object was the glorification of the recorder. Finally, the lower part of the face of this egregious performer of heroic deeds is painted red, a feature of one mode of Dakota face painting which is found also in the case of the principal performer in groups 3, 6, 8, 13, 14, 15, and 23, in all of which he is identified by his shield as the hero.

[1] Mallery, 4th Report, pp. 211, 212.

The horseman in No. 18, though almost completely disguised in tail coat, trousers, and boots of quite Parisian modishness, reveals himself through his face painting and his coiffure, which are the same as those just referred to for the individual in group 16. The hair and the back streamer of the pursuing horseman in group 19 are his only physical marks of identification. For the former feature, what

From Group 13.

has been said of the individuals in groups 16 and 18, and for the latter, of those in 9 and 17, is relevant here. In groups 20 and 24, identification remains problematical, only the general consideration repeatedly alluded to being applicable; in No. 20 we cannot even be certain which of the two figures is to be regarded as the victor. Whatever device may originally have been painted on the shield at the back of the man in the dark shirt, can no longer be deciphered.

From Group 14.

It appears then that, taking the number of groups as twenty five, the hero of the record can be identified with certainty in sixteen of these groups, and with considerable probability in seven others. If only the sixteen first mentioned are to be considered, they are sufficient to show that this is a personal record or biography, and not a time count or calendar. In group 7, which includes four closely associated figures, it is possible that two distinct fights in which the hero was engaged are recorded, and the same thing is true of group 12. These groups are respectively the second from the right in the second row from the bottom, and the last on the left (six figures including what is left of the horseman and his horse) in the row above. The two upper figures in the former group are shown in the process of losing and gaining respectively a scalp. It is possible that this may have been another incident in a battle in which the most important event, from the recorder's point of view, is shown below. On the other hand it may have been an entirely distinct scalping exploit on the part of the hero, and have been squeezed into the row, after the completion of the latter, as an afterthought. This seems less likely; but there is no means either of deciding the point or of identifying the actors in the scene. In group 12 the four figures on the left may possibly stand for an episode distinct from that represented by the other two; but in view of the fact that the six figures are placed quite close together in spite of there being plenty of room in this part of the robe, it seems more likely that only one event, or two episodes of it, are here depicted. If these two groups are to be split up, we have a biography in twenty seven instead of twenty five chapters, and two more cases in which the positive identification of the hero seems impossible.

In three cases we may perhaps have the record of intestine strife. The defeated warriors in groups 10, 15, and 21—the second group from the right, the first on the right, and the first on the left in the third, fourth and sixth rows, respectively, counting from the bottom of the robe—all have their faces painted in the same manner as that of the hero. Of his antagonists in the remaining groups, seven are Crow Indians, if we may judge from the fact that their foreheads are painted red, a mark, as we have seen, by which the Dakota were accustomed to distinguish these people, their inveterate enemies, when they represented the latter on painted robes.[1] These are the

[1] Mallery, 4th Report of the Bureau of American Ethnology, pp. 213, 214; 10th Report, p. 380.

man with a bow in group 6, the second group from the left in the second row, the two unmounted men in the group to the left of this, the right hand man among the unmounted figures at the extreme left of the row next above, the unmounted man with the bow in the group immediately above this, the horseman with the dark mount in the second group from the right in the fifth row, and the figure with the shield at his back at the extreme left of the same row. The body painting of two of these individuals closely resembles that of a Cheyenne depicted on a buffalo robe which figures in the album of plates appended to Maximilian of Wied's Travels in the Interior of North America as the property of Matatope, a Mandan chief.[1] Perhaps, as Mallery suggests in a similar connection,[2] the Dakota may have tended to apply a mark originally peculiar to the enemy, par excellence, to other enemies, simply because they shared Crow or Cheyenne quality as such; they would thus by a process of generalization have arrived at something very like an ideograph for "enemy." The body painting referred to is the horizontal striping down the side of the body from shoulder to ankle which appears on the erect figure above and to the right of the first large quillwork disc at the left of the robe, and on the kneeling figure at the left of the second horizontal row. In the latter case the arm and part of the thigh are free from stripes; in the former the marking is practically identical with that of Matatope's Cheyenne. These people, though later allied with the Sioux, were hostile to them down to the early part of the nineteenth century, a period to which at latest the buffalo robe now in question certainly belongs. In a few cases, including some of those with foreheads painted red, an arrangement of the hair which resembles the Crow topknot is found. In one case, at least, this is combined with a fashion of supplementing and adorning the long back locks which resembles the horsehair coiffure invented by the Crow though not confined to them.

The man who is being struck on the head with a bow, thus providing our hero with the opportunity for recording a first class military achievement, wears a long queue to which are attached several yellow (or brass) discs. D. I. Bushnell[3] states on the authority of Dodge, Maximilian of Wied, and a note attached to a specimen in the National Museum, that this form of queue has been observed

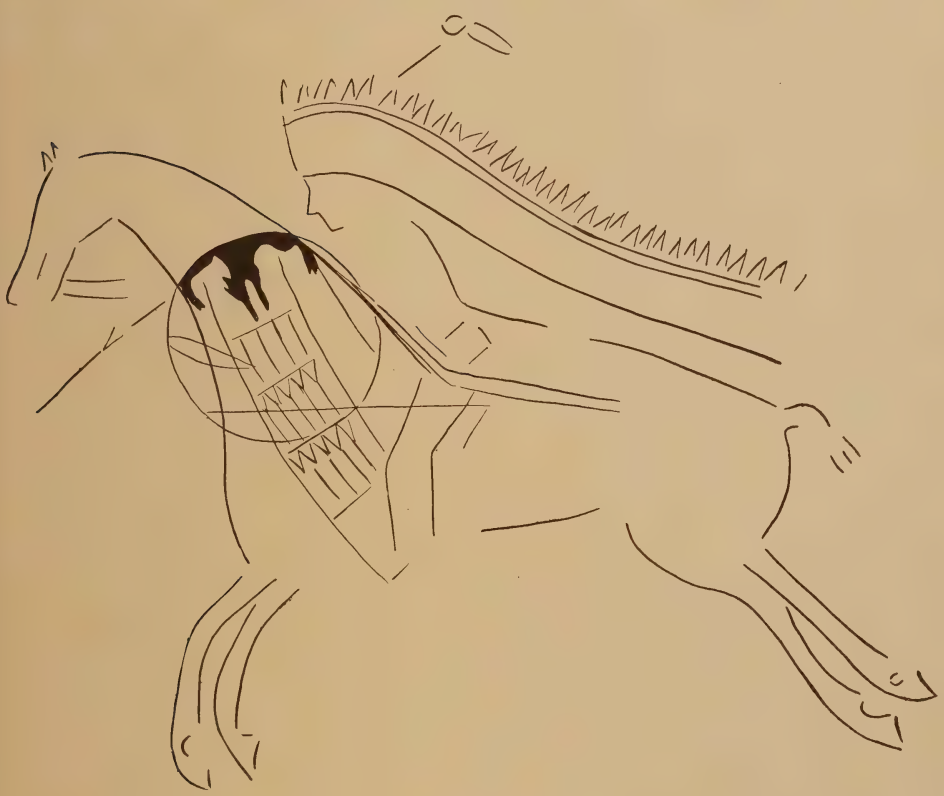
[1] See also Mallery, 10th Report, p. 382.

[2] 4th Report, loc. cit.

[3] D. I. Bushnell, American Anthropologist, XI (N. S.), pp. 419, 420.

among the Comanche, Kiowa, Dakota, and Ta-a-wash (?Tawehash) Indians. Maximilian[1] also reports this or something very like it as a Mandan fashion.

In group 9, at the extreme right of the third horizontal row, the antagonist on foot is meeting the hero's charge with a rain of bullets, the direction of which is shown by a number of short strokes ending in round marks, the latter denoting the bullet itself and the former, roughly, the direction of its point of origin. Although the hero is



From Group 15.

armed only with a lance, the issue of the fight is not in doubt. He got the rifleman's scalp, a fact which is indicated by a smear of red on the hair. The unmounted combatant wears a sash, the loop of which, coloured red, surrounds the upper part of his body while the dark coloured end streams behind in a way evidently intended to emphasize the not very striking impression of speed in running to meet his fate given by the awkwardly bent knees. These sashes were badges of high office in several military societies among Plains tribes,

[1] Thwaites (Maximilian), III, pp. 51–52.

neighbours of the Dakota, and among the Dakota themselves. In some cases, those entitled to wear the sashes as military insignia carried into battle a stake or a lance with which they fastened the end of the sash to the ground, in token that they would fight at that spot to the death, if need were. If his friends fled, the wearer of the sash must remain to carry out his sworn resolve unless a comrade pulled up the stake and thus released him from his moral obligation as well as from his actual tether. If this man is a Crow, and the form of his topknot may perhaps indicate this, it does not appear that the wearing of the sash involved any such form of premeditated suicide for him. The lance which appears in close association with the sash is probably not intended to represent one which the wearer of the sash would use to tether himself to—he is certainly not depicted as a fixture here—but is probably a symbolic repetition of the lance of the rider intended to record emphatically the fact that the latter personage successfully pitted cold steel against bullets and to show where the lance took effect. The second gun, placed beside the second lance, is no doubt a memorandum of the capture of the gun shown below in the hands of the original owner.

If it is not possible without a history of the robe, which we do not possess, to ascertain the personal as distinct from the national identity of the owner of the robe, we can learn something of his position in society from the record before us. At eight points on the robe he has placed a tally of his takings in scalps or horses or both in connection with the painted episode next to which the tally stands. Each time the score is accompanied by the representation of a typical Plains pipe and of a rod from which a scalp—sometimes more than one—is suspended. The pipe, in such a context as this, is the mark of the socalled partisan, a word which, in this usage, signifies the leader of a war party. It was carried into battle slung on the back of the leader or held up by him in front of his body as a sign of his authority.[1] The leadership of a war party was one of the stages in a warrior's advance to the rank of chief, a position which we may perhaps conclude was attained by the owner of this robe from the fact that wherever he is represented wearing the war bonnet with the long streamer of eagle feathers this is provided with buffalo horns attached at the side of the head.[2]

[1] Mallery, 4th Report of the Bureau of American Ethnology, pp. 168, 169; 10th Report, p. 424; Thwaites (Maximilian), XXIII, pp. 350, 352–353.

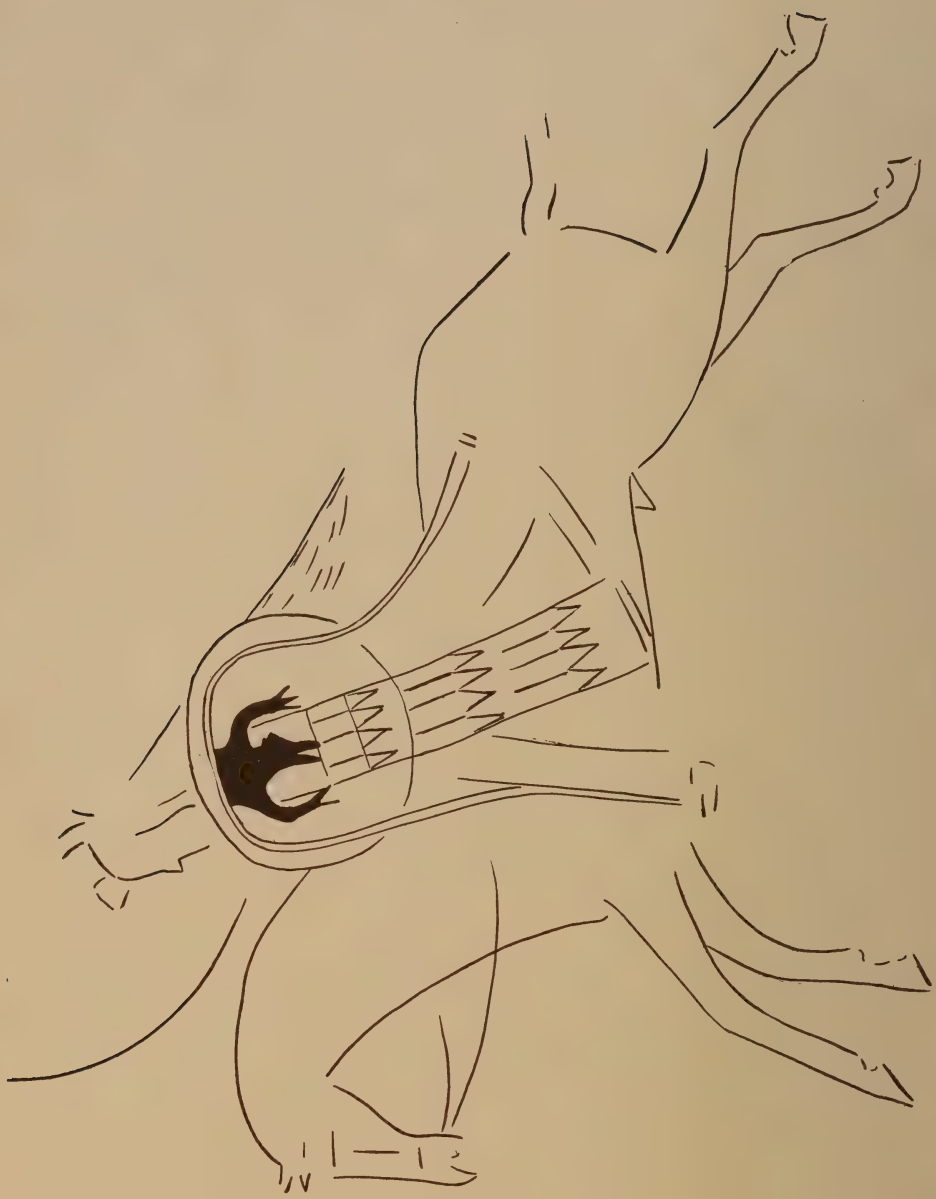
[2] Mallery, 10th Report, p. 424.

Scalps taken by the members of a war party were attached to rods in the manner indicated here. The skin, painted red, was stretched over a hoop which was tied to the rod. The trophies were borne in advance of the returning war party and handed over to the wives of the takers, who carried the rods with their grisly emblems of victory in the scalp dance.[1] The scalps were not afterwards always preserved whole; locks of hair were sometimes taken from them to form the fringes which adorned the scalp shirts or leggings of the warriors. In several groups, as in the second from the right in the second row, the fourth from the right in the fifth row, and the second from the right in the sixth row, the hero's charger carries a scalp dangling from the bridle. This does not represent a freshly taken scalp, but one which had been previously used in the scalp dance and preserved afterwards for this special purpose. In all cases the circle representing the scalp proper is painted red, the streaming locks are black (dark brown).

In all the tallies appended to the realistic representations of selected incidents in battles or raids, except two, a single scalp hangs from the rod. The number of slain is shown, presumably, by the open circles to which is sometimes added a schematic representation of drooping hair. The most notable exception occurs in the lower left hand corner of the robe, where five scalps are shown attached to the rod, while only three heads appear in the score. Since, here as elsewhere, the upper part of the circular outline of these conventional symbols for lives taken is smeared with red, the intention is undoubtedly to indicate that these slain were also scalped. If, as seems likely, the signification of the single scalp attached to the pole in the other tallies is merely a general intimation that scalps were carried home, while the actual number of these trophies is given by the conventional heads, why should five scalp symbols be attached to the pole in group 4? Perhaps the answer is that scalps were not taken only from the slain. The kneeling victim in the middle of the second horizontal row of pictures is obviously not a corpse. It may be that the extra scalps tallied for group 4 were taken from the living.

Group 24 (top row, right) represents a raid on two tipis, designated by three or four sticks crossing each other above, in which one of the defenders armed with a gun is being shot down as he attempts to escape. Here the tally in the corner includes three slain. The representation of these is somewhat less schematic than in the other

[1] Op. cit., p. 448 and Fig. 587; Thwaites (Maximilian), XXIII, pp. 351, 352.



From Group 17.

cases. An open rectangle is added to the circle, so that we have head and trunk represented. In no case is the outline closed. This perhaps denotes "nothing inside"—death.[1] The same sort of symbolism appears in the less formalized tally in group 23 immediately below, in the next group to the left of this (one head), in the first group on the right in the row just below (two heads and shoulders), and in the case of the enigmatically gigantic head in the middle of this last row.

In two cases the score of scalps and of the killed is accompanied by rows of semicircular marks, representing the tracks of horses. This is a conventional way of recording the number of horses captured. In the lower right hand corner, where the tally is presumably a record of the results of a raid or battle in which the duel pictured in group 1 was, for the recorder, the most interesting incident, the amount of booty is registered as thirty four head of horses. This does not necessarily mean that the hero was personally responsible for all these captures; since he was leader of the war party, as the pipe, indistinctly visible below the row of heads, indicates, he would receive credit for them. The number of horses he is credited with, as leader in one of the two exploits recorded in the immediate neighbourhood of the tally set down in the upper right hand corner is thirty nine. The similar marks above and below the horse of his opponent in the upper left hand corner denote, if they are not here simply an indication of the direction taken by the charges of enemy horsemen, a much smaller number of horses captured. In this fight the recorder does not appear as a leader.

An interesting variety of weapons is shown in the pictures: the lance, in some cases elaborately decorated with eagles' feathers, in others having only one or two feathers at the butt; the bow; the tomahawk; the scalping knife; the gun; and the cavalry sabre. In two places the tomahawk appears as the weapon by which an enemy was slain: in group 5, at the left end of the second horizontal row of pictures counting from the bottom, the unmounted man standing behind the kneeling bowman is shown with a tomahawk in close contact with his head, and the case is the same of the individual whose head and shoulders only appear in the middle of the second row from the top. This is a common method of specifying the means by which a man was killed. In this connection a fine bit of swagger may be noted. The foremost pedestrian figure of the group last

[1] Cf. Mallery, 10th Report, p. 660, Fig. 1073.

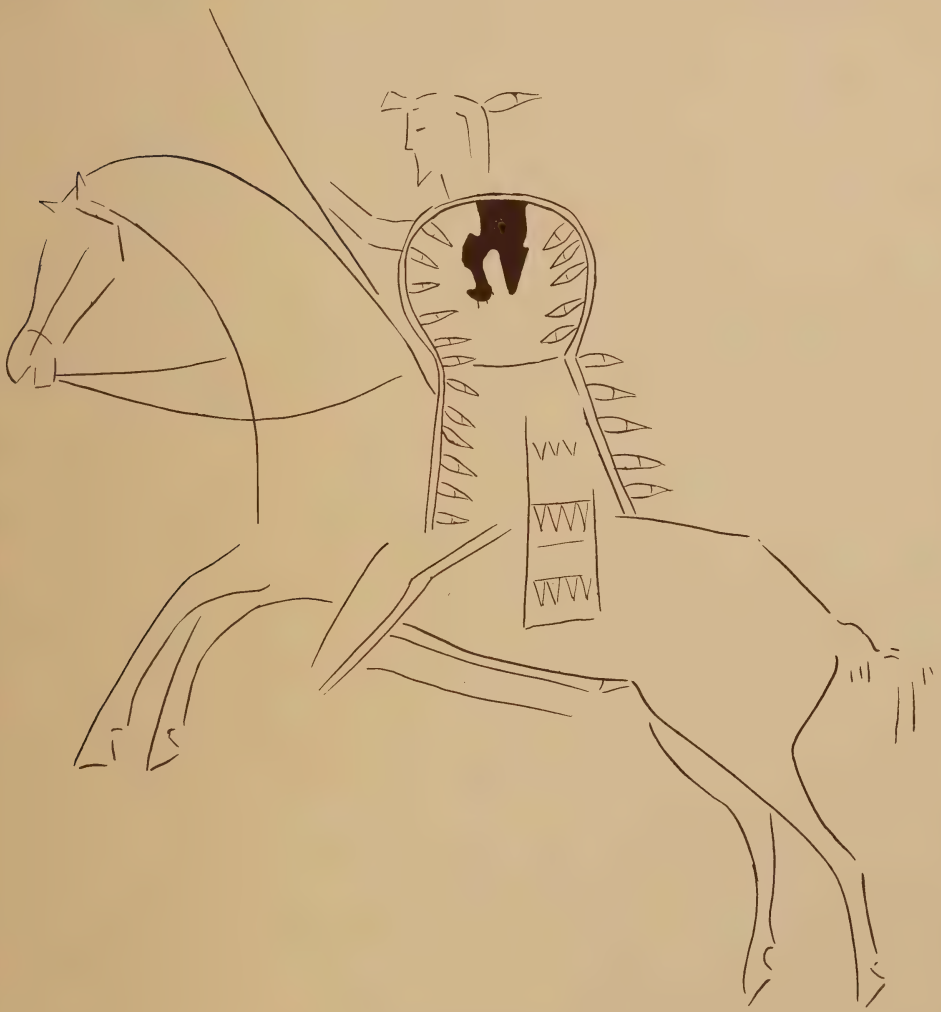
mentioned was knocked on the head with a gun butt although himself armed with a weapon whose effective use would have prevented a fight at close quarters. It is the same sort of practical irony as is depicted in the scene already referred to where a man is being brought down at close quarters by what would seem to most people a quite improper use of the bow. In the group which includes this episode,

From Group 21.

the first incomplete figure in the rear of the man who is receiving what has been described as the greatest possible insult that could be offered to a Plains warrior[1] exhibits a somewhat unusual feature. The usual means of representing a scalping is by painting the top of the head red. Here the operation is denoted by picturing a scalping

[1] Mallery, 4th Report, pp. 211, 212.

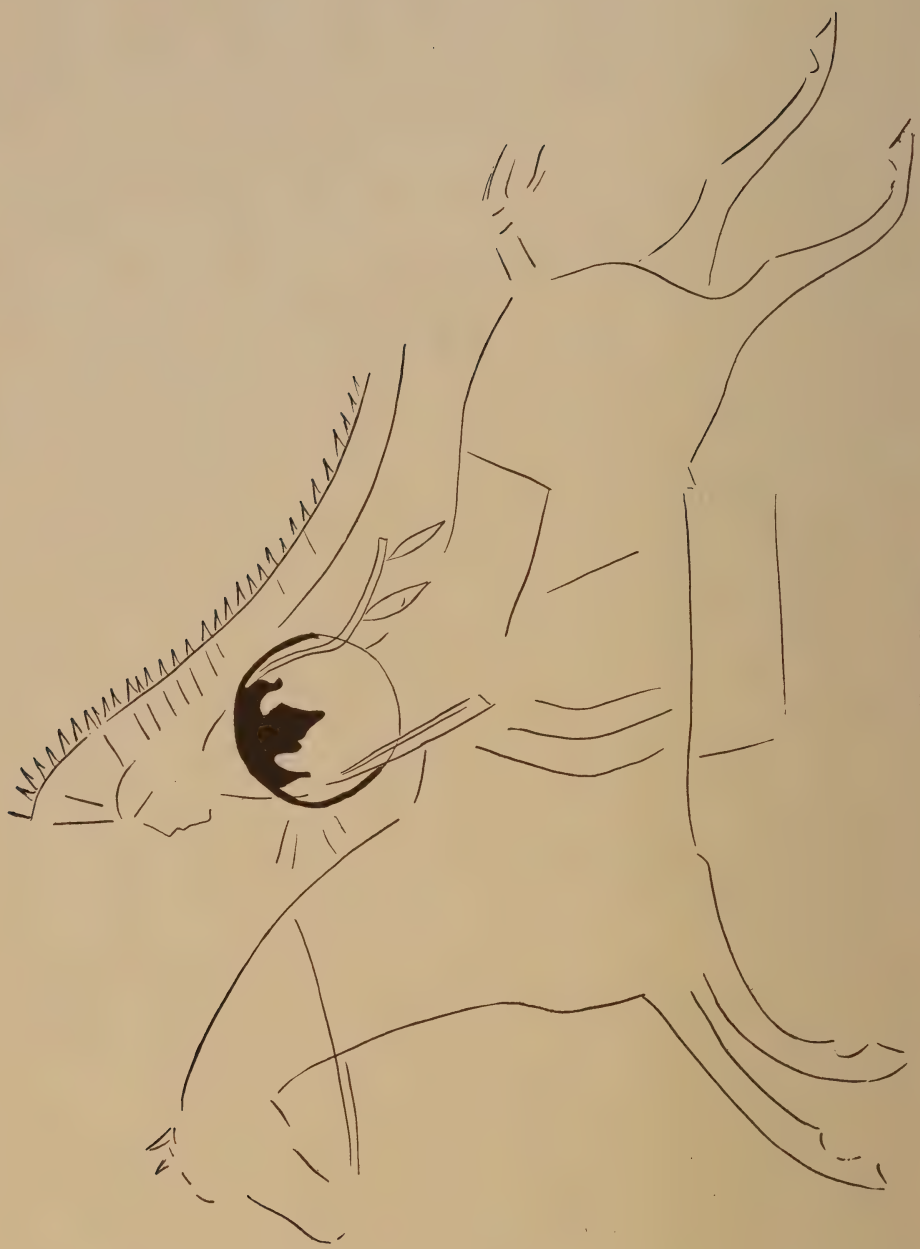
knife in contact with the head; the form of the weapon may be compared with that of the knife employed in the scalping scene depicted below in the middle of the second row. In the former case the victim seems to have a beard; perhaps he is a white man, the only one appearing in this record. The triangular black mark on



From Group 22.

the chin of the individual carrying a shield bearing a modification of the hero's device in group 22, the second from the right of the second row from the top, is no doubt a feature of his war paint.

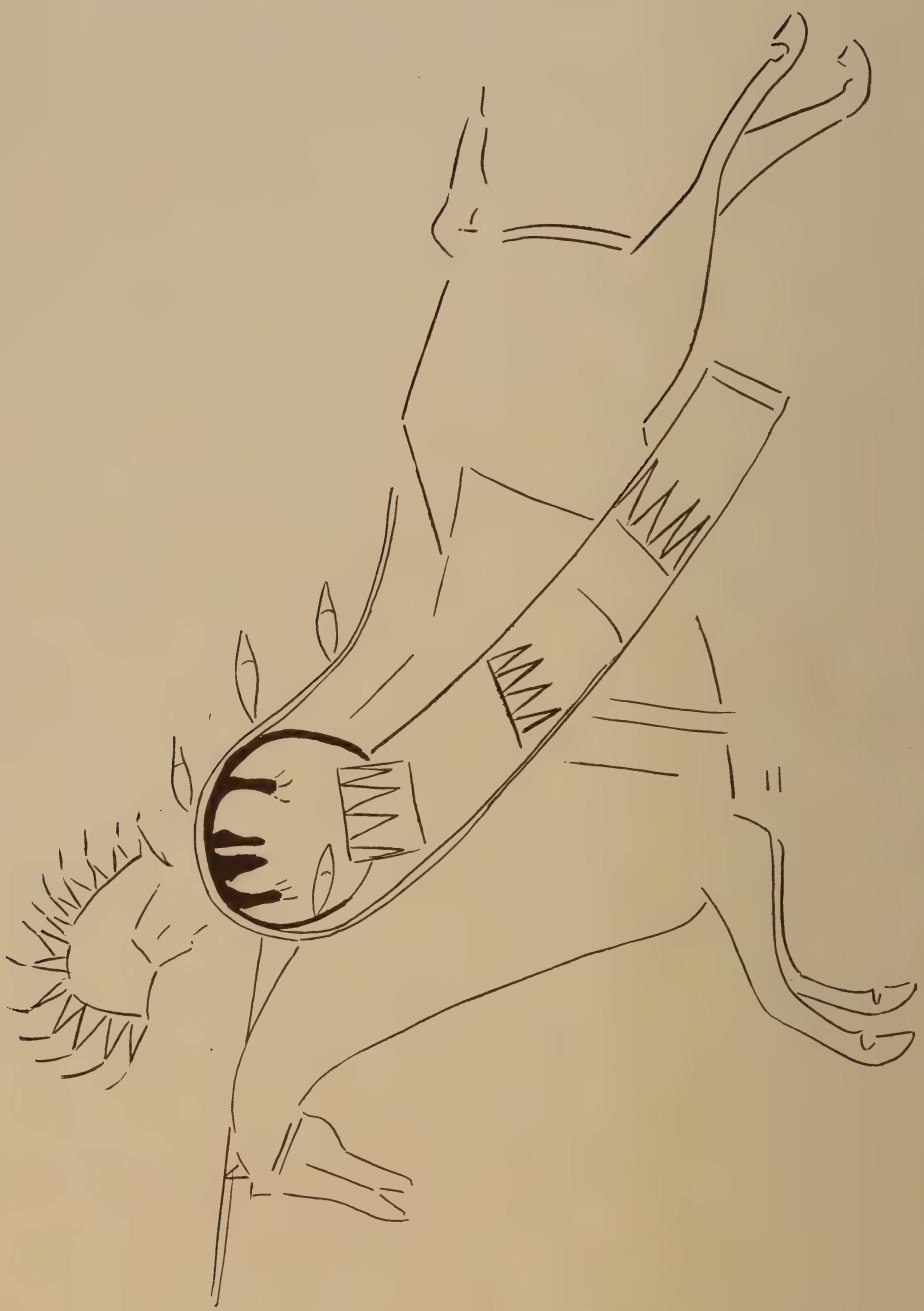
The question of the hero's relations with the white man cannot be determined from anything in this record. He appears to have a definite fondness for European clothes. His appearance in full



From Group 23.

European costume, except for the hat, in group 18 has already been noticed. In a dozen cases at least he wears a long-skirted uniform coat of much the same pattern as that which in Maximilian's time (1832–1834) and earlier was a customary gift from white traders and frontier officials, both British and American, to Indian chiefs. In most of the pictures in which it appears here as worn by the hero this coat is dark with red pocket flap and facings; in three cases, at least, it is red. This may possibly indicate friendly relations with both British (Canadians) and Americans, though of course, such garments might have been obtained by methods quite the reverse of friendly. Two pieces of inconclusive evidence point in both directions. On the one hand, there is what appears to be the scalping of a white man already referred to. But, if the victim is in fact a white man, is it certain that the scalping was perpetrated by the hero? As we have seen, the daring bowman in this group is probably he. But was the scalp taken by him? The unusual mode of representing the operation permits a doubt on this point; it is possible that the victim may have fallen before the enemy on whom the hero is inflicting such signal disgrace. In the third group to the left of this a personage who we have found reason to believe is the hero, in a uniform coat of possibly American origin, is pursuing another Indian, probably a Crow, to judge from the red paint on his forehead, who is carrying off an American flag in which he has draped himself. The record is not unambiguous, but it looks rather like the performance of an act friendly to Americans. As a matter of fact the Dakota, who had entered into friendly relations with the British when the latter assumed control of Canada, remained their allies until the war of 1812. In 1815 the government of the United States entered into a formal treaty of peace with the Dakota, which continued to be observed for a long time thereafter. In Maximilian's time the Dakota, with the exception of one group, were known as friends of the Americans.

When mounted the hero uses indiscriminately a native weapon, the lance, and two weapons of European origin, the cavalry sabre and the gun. The gun and the lance appear to have about an equal claim to his favour; in at least one case he carries both. The sabre appears twice: in group 1 at the lower right hand corner of the robe, where it is opposed to the lance, and in group 17, second from the right of the fifth row, where the hero carries also a gun and is opposed by two other horsemen, the foremost of whom seems to be grasping the bridle



From Group 25.

of the hero's horse. No weapon of this antagonist is visible; perhaps the gun held in the hero's left hand has been taken from this man. The third horseman is armed with a lance.

In most cases when a gun is carried—sometimes no more than the end of the barrel is shown projecting beyond the chest of the charger—the lower edge of the barrel is outlined in red. No doubt this is intended to represent the ramrod, which was sometimes decorated with red cloth.[1] As it was then immobilized for practical use, a second one was carried, detached from the gun. Red is symbolic of strength and success, of victory and its objective tokens on the body of a combatant, wounds and death by wounds; and that the ramrod came to symbolize the victory compelling power of the gun, among the Teton Dakota at any rate, seems to be implied also by the fact that when an enemy was killed with a musket, the slayer was entitled to wear in his hair a small piece of wood which was said to represent a ramrod.[2]

The occasional apparently indiscriminate placing of guns not held by anyone among the figures which compose the different scenes of the record on the robe demands a word of comment. Allusion has already been made to two cases of this, in groups 9 and 22. Two ostensibly ownerless muskets are shown in the contest between two unmounted warriors in a camp of five tipis which is depicted immediately above the last large quillwork disc at the left of the robe. The explanation here is sufficiently obvious. The fighters, originally armed with guns, have discharged them without effect and come to grips with natural weapons. In the scalping scene in the middle of the second row of pictures a musket appears behind the operator. This is the weapon with which he has previously wounded in two places the now helpless brave who kneels before him. The conventional sign for bullets, a line terminating in a small round mark, is seen to end at two points on and just below the right shoulder of the victim. In the case of the two men struggling for the possession of a musket in the group between the two large rents in the robe, the man on the right having vainly discharged his piece is trying to wrest his opponent's from him after throwing aside his own. The abandonment of the now useless piece is obvious; its ownership is indicated by its position close to the body of the combatant at the right.

[1] Thwaites (Maximilian), XXIII, p. 357.

[2] Op. cit., XXII, p. 326.

The colouring of the horses in the different groups shows considerable variety. In group 1 the hero's horse, at the left, is painted red with a dark mane and tail. Red, being symbolic of vigor and success, was a favourite colour for the painting of the war horse. The zigzag marking traced in green on the legs of this horse, and showing more vividly in red and white on the legs of the antagonist's black charger, is the symbol for lightning—speed and death. This symbol would be doubly appropriate in this position. It was a creditable military exploit to ride down an unmounted opponent, more creditable still if the opponent's death resulted from the act. Thunder was associated by the Dakota with a bird, the thunder bird, commonly represented as an eagle, but also with other creatures, especially the war horse. The horse, whose origin was mysterious to the Indian, came to be regarded as the gift of that mysterious natural force, the thunder. Hence the characteristic emanation of this force was appropriately represented on the legs of a war horse. In the case of the red horse, the symbol appears in green. Green and blue are not native colours; after the introduction of blue to the Plains Indians it often took the place of the native black (brown). Black, which was used in body painting to denote victory or enemies killed, seems also to have been connected with thunder and was sometimes replaced in this connection by blue. As blue and green were also sometimes interchangeable, this may possibly account for the use of green in the symbol for lightning on the legs and neck of the red horse; either black or, as in the case of the same symbol on the same parts of the other horse, red would have been more usual. The lightning symbol was sometimes painted green in reference to summer, the time for thunder storms. But green was also used to designate a chief, and this may account for the fact that in two cases the hero rides a green charger, and once wears a green coat, and that in several cases green takes the place of red for the strip of material which forms the foundation of his war bonnet and in the dyed horsehair elongations of the feathers, while the horns of the bonnet are in most cases green.[1]

The right to wear a bonnet of this kind, with the horns of a chief, could be won only on the battlefield by the performance of a certain number of exploits whose character was defined in a recognized code.

[1] Cf. Wissler, Decorative Art of the Sioux Indians, Bulletin of the American Museum of Natural History, XVIII (1904), p. 249; Some Protective Designs of the Dakota, Anthropological Papers of the American Museum of Natural History, I (1907), pp. 46, 48.

The right depended ultimately in the winning of a certain number of honours or coups—the French word is generally used because it was that earliest applied by Europeans to this feature of the Indian military system, which was connected with the striking of blows in battle. The code is briefly and clearly summed up by Curtis as follows: "A coup could be won by actually killing an enemy, by striking the body of an enemy whether dead or alive, by capturing a horse or a band of horses, or by taking a scalp. Honors were counted on each hostile warrior by the first four who struck him, the first in each case winning the greatest renown. . . . But the greatest exploit of all was to ride into the midst of the enemy and strike a warrior in action without attempting to wound him. When a man had led four war parties, and in each achieved a first honour, he was eligible to chieftainship."[1] According to Mallery, "striking the enemy with a bow is considered the greatest insult that can be offered to another. The act of so doing also entitles the warrior to count one coup when relating his exploits in the council chamber."[2] A scene of this kind is depicted, as we have seen, on our robe. If we are to accept this as an exploit of the hero, as it almost certainly is, we have for him one coup at least of a nature which would count towards his claim to the rank of chief. The record shows besides, in the tallies previously spoken of, at least eight occasions when its principal character bore the pipe which was the mark of the leader of a war party. As to the other three exploits which were necessary, together with only one half of the instances actually recorded of leadership, to make him eligible for chiefly rank, I am unable to distinguish them, although they must be recorded on the robe. It is the view of Grinnell, which he appears to support mainly by evidence from the Cheyenne, that neither the taking of a scalp nor the mere killing of an enemy counted among the Plains Indians as a coup.[3]

[1] Curtis, III, p. 22.

[2] 4th Report, pp. 211, 212. See also 10th Report, pp. 658, 659, Fig. 1062, and 4th Report, pp. 116, 117.

[3] Coup and Scalp among the Plains Indians, American Anthropologist, N. S. XII (1910).

Ceremonial shield of the Shoshone.

FIG. 1.

SOME SHIELDS OF THE PLAINS AND SOUTHWEST

By H. U. Hall

THE hero of the pictorial record of Plains Indian life described elsewhere in the present number of the JOURNAL carries a shield to which reference is made on p. 17. There are other shields represented on the robe. All are of the round variety which is characteristic of the region concerned. A group of shields of this pattern, all but two of which are exhibited in the Plains Indian room of the MUSEUM, is the subject of the following notes.

The round shield or target is the characteristic New World shield. Other forms occur, but among aboriginal American users of shields, this type is predominant, and the geographical limits of its distribution suggest that its use spread from one centre, probably Mexico.[1] All the shields dealt with here are made of hide, which was the only material used for shields among the Indians of the Plains; their neighbours of the southwest, the Pueblo tribes, made their round shields of wicker and of a heavy fabric of cotton as well as of thick rawhide. In both regions the shields bore symbolical painted devices,[2] as they did also in Mexico.[3]

The indigenous animals which afforded hide of suitable thickness were the elk and the buffalo. In later times horsehide and cowhide came into use. The introduction of firearms might have been expected to render the rawhide shield obsolete, but the protection afforded by it had probably been from very early times conceived as largely of a magical nature, and the shield long continued to be a part of the equipment of the mounted warrior armed with musket or rifle. Its early use in ceremonies of a magico-religious character also ensured its survival for similar purposes after its abandonment by the warrior in the field. Writing in 1907 of the Dakota, Wissler says, "Practically no shields of buffalo hide are to be found in the hands of the surviving Dakota; but in social and religious ceremonies, models or shield-covers of buckskin or cloth, upon which are painted the designs formerly placed on shields, are often used."[4]

[1] C. Wissler, The American Indian, p. 138 (1923).

[2] Cushing, quoted by W. Hough, Primitive American Armor, Report of the U. S. National Museum, 1893, p. 628.

[3] Z. Nuttall, Internationales Archiv für Ethnographie, V (1891).

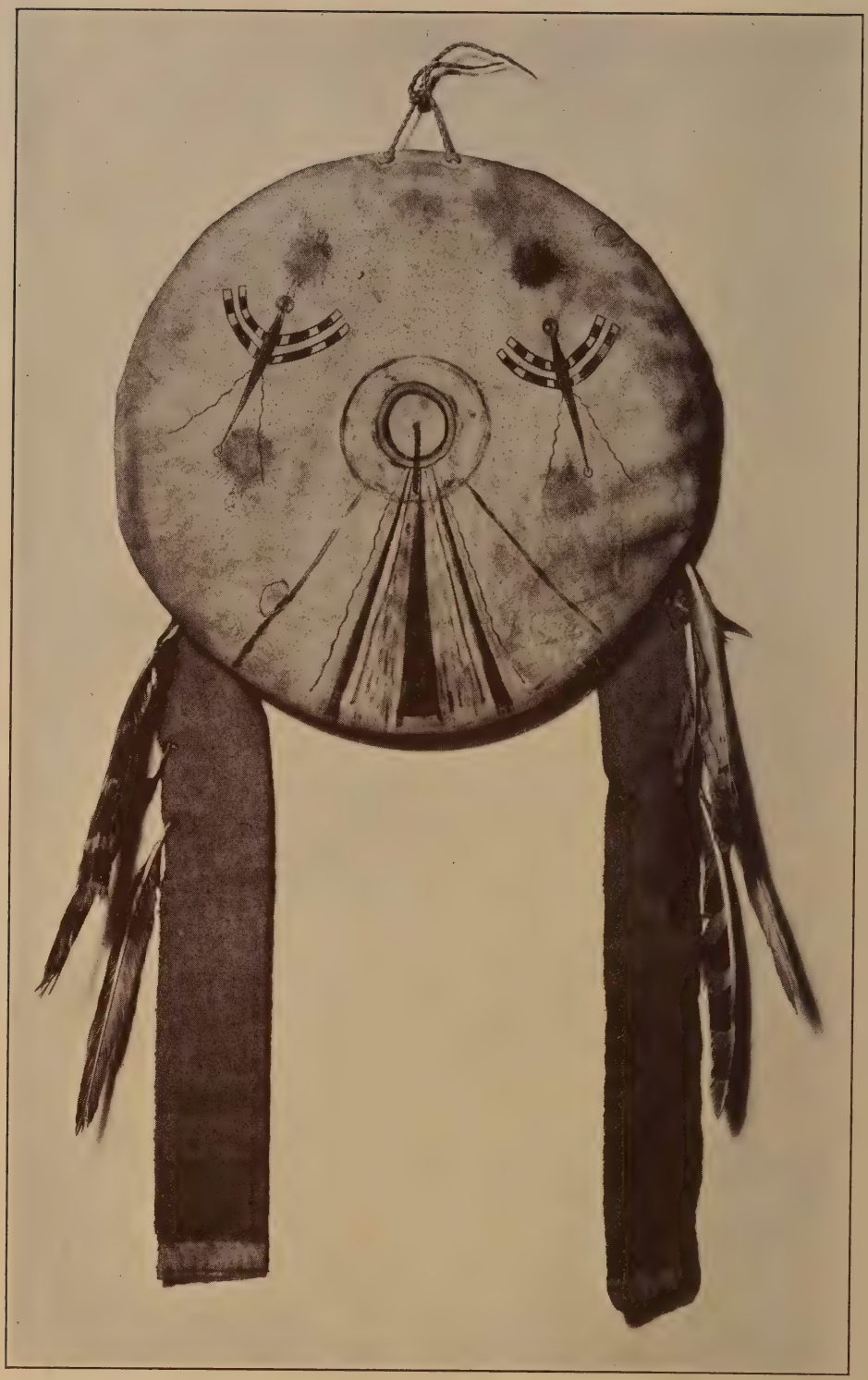
[4] Some Protective Designs of the Dakota, Anthropological Papers of the American Museum of Natural History, I (1907), p. 22.

Shoshone shield of Fig. 1, with upper row of feathers parted to show the device in red, appearing here as grey, in white and blue.

FIG. 2.

These shields are regularly dished, that is, so shrunken and modelled in the making as to present a convex obverse to the enemy, and to provide, with the assistance of a swiftly observant eye and a shield arm quickly responsive to such observation, an always inclined surface to the impact of a missile or the thrust of a spear and thus cause either to glance aside. It may be doubted, in spite of assertions to the contrary, that what in the way of form or manipulation would stop an arrow could be similarly effective except by accident against a bullet. It was not even infallible when opposed to the weapons it was anciently designed to meet; witness an arrow hole and two spear thrusts respectively in two of the examples of shields figured here, Fig. 16 and Fig. 13.

Dr. Wissler's analysis of the motives which governed the former use and the later retention of the shield by the Dakota is interesting and suggestive. He says, "When the enemies of the Dakota were armed with native weapons, the shield had some value in itself, because few arrows could get through it, and it was of sufficient strength to ward off a blow from a club or an axe; but even at that time the designs and medicine objects tied to the shield seem to have been regarded as of greater importance than the mechanical properties of the shield itself. It was the power represented by the design to which the owner of the shield looked for protection. Naturally, with the introduction of firearms, shields ceased to have a real protective value; but their designs were still looked upon as capable of affording protection against evil. According to the statements of some old men who still have faith in protective designs, the ancient shield manifested its power upon the mind of the enemy by influencing them to shoot at the shield rather than at the exposed parts of the body of its bearer. But when firearms were introduced, experience demonstrated that the shield was no longer a desirable object in battle, because the same influence that drew arrows to it drew bullets also, and in this case with fatal results. From this they concluded that guns represented a mystic power superior to that of shield-designs, but that the latter were still efficacious, except when so overpowered. . . . These men seem to have grasped the idea that the shield, being a conspicuous object, would attract the attention and thus the aim of the enemy; but they confused this psychological explanation of the observed facts with a mystic conception that the magic power of the design upon the shield was the cause or force that reached out and lay [sic] hold of the attention of the



Outer cover of Fig. 4. The original colour of the darkest markings is blue, of those not quite so dark it is green; the lightest are red in the original. The four irregular blotches on both covers are blue. The light areas in the dragonflies' wings are yellow, the bodies and heads are green, and the wavy lines which seem to represent their legs are blue. The ground is yellow.

FIG. 3.

Plains shield in inner cover. The dark lines, areas, and dots are blue; the fainter markings are red. The ground is yellow.

FIG. 4.

enemy. Yet the introduction of firearms did not relegate the shield to oblivion; and shield-designs are still cherished . . . because they represent a kind of individual totem or protective power."[1]

It is also interesting to recall in this connection the statement of Maximilian of Wied referred to on p. 33 here, about the symbolical use and the decoration of the ramrod among the Mandan, Hidatsa, and Teton Dakota, remarks which seem to indicate that the ramrod, in virtue of being the implement which was used to charge the musket, had come to represent itself the superior death dealing power of the charge which it appeared to control. I infer that the decoration of the ramrod attached to the gun was symbolical of its magical energy, since the purely decorative treatment of an essential part of the marksman's equipment could scarcely be regarded as important enough in itself to justify rendering that object so useless for its original purpose that it had to be duplicated and the marksman burdened with an extra piece of equipment.

The device on the shield was magical in no merely passive or defensive sense. As in military strategy the most effective defence may be an offensive, so the protecting shield in Dakota military magic extends the scope of its power into the field of offence. One of the shield covers described by Wissler bears as part of its device the zigzag symbol for lightning, of which we are told that it here represents "the death dealing power conferred upon the owner of such a shield-design."[2] The new magic concentrated, so to speak, in the ramrod comes to reinforce rather than to replace the old.

It does not seem clear whether the rawhide disc in itself was endowed with any part of the magical power that inhered in the whole apparatus with its painted cover and attachments of feathers, furs, and other pendent charms, or that, like a Congo fetish figure, the power resided in the attachments and was communicated to the object to which they were attached only so long as they remained in place. Of the twelve shields with which we are here concerned, eight have a painted device on the shield itself; one other, also without cover, has for its only decoration, apart from traces of colour, thongs passed through slits in the two layers of hide of which it is made so as to form a number of circles concentric with the circumference of the shield, the primary object of this contrivance being evidently to hold the two layers of hide together. To the shields themselves or

[1] Loc. cit., pp. 22–23.

[2] Loc. cit., p. 24.

to their covers feathers are often attached, usually forming a fringe, which, falling from the upper part of the circumference, may obscure or completely hide the painted decoration of the shield or cover. Sometimes the feathers are attached to the shield or cover directly; sometimes indirectly by means of a band of woollen stuff, usually red, to which they are fastened. Fig. 1, a Shoshone shield, shows a good example of the kind of feathered streamer which is represented as an attachment of some of the shields on the painted buffalo robe. The shield shown in Fig. 3 has two covers, both painted, of which the outer forms a protection for the feathers which decorate the inner. Among the feathers of Fig. 5, a Dakota shield, are fastened several other objects having magical power—a bone whistle and two tails of some small animal. Such a shield with its cover enclosing magical objects is treated by the Blackfoot as a "medicine bundle," according to Wissler.[1]

The manufacture of a rawhide shield, as it was carried out in the thirties of the last century among the Dakota, is described by George Catlin[2] as follows, "The process of 'smoking the shield' is a very curious as well as an important one, in their estimation. For this purpose a young man about to construct him a shield digs a hole of two feet in depth in the ground and as large in diameter as he designs to make his shield. In this he builds a fire, and over it, a few inches higher than the ground, he stretches the rawhide horizontally over the fire, with little pegs driven through holes made near the edges of the skin. This skin is at first twice as large as the size of the required shield; but having got his particular and best friends (who are invited on the occasion) into a ring to dance and sing around it, and solicit the Great Spirit to instil into it the power to protect him harmless against his enemies, he spreads over it the glue, which is rubbed and dried in as the skin is heated; and a second busily drives other and other pegs inside of those in the ground, as they are gradually giving way and being pulled up by the contraction of the skin. By this curious process, which is most dexterously done, the skin is kept tight whilst it contracts to one half of its size, taking up the glue and increasing in thickness until it is rendered as thick and hard as required (and his friends have pleaded long enough to make it arrow and almost ball proof) when the dance ceases and

[1] Ceremonial Bundles of the Blackfoot Indians, Anthropological Papers of the American Museum of Natural History, VII, p. 117.

[2] The Manners, Customs, and Condition of the North American Indians, London, 1841, Vol. I, p. 241.

Shield in cover. Perhaps from the Dakota. Said to have belonged to Sitting Bull.

FIG. 5.

Shield cover of Fig. 5, showing painted device. The circular ornament in red; the strokes arranged in radiating rows about it are yellow. The upper star is red, the lower yellow outlined in red. A bunch of small feathers and thongs hangs from the centre of the upper star. The field is divided into two semicircular areas, that which includes the red sun disc being yellow, the other white.

FIG. 6.

the fire is put out. When it is cooled and cut into the shape that he desires, it is often painted with his medicine or totem upon it, the figure of an eagle, an owl, a buffalo, or other animal, as the case may be, which he trusts will guard and protect him from harm; it is then fringed with eagles' quills or other ornaments he may have chosen, and slung with a broad leather strap that crosses his breast. These shields are carried by all the warriors in these regions [Upper Missouri River] for their protection in battles, which are almost invariably fought from their horses' backs."

A different method practised by another Plains tribe, the Blackfoot (Siksika) is described by Dr. Wissler.[1] "When a shield was to be made, a buffalo bull was skinned by cutting down the back. A large piece from the breast was taken, laid on the ground, hair side up, and soaked with boiling water which loosened the hair and caused the shrinkage. Finally the skin was turned over while wet and shaped over a small heap of earth and weighted down for drying. It was this heap of earth that gave the peculiar dish observed in these shields. The hair was removed with a stone, not with a scraper. The last step in the process was to trim the edges to a circle previously marked out by a stick."

The Plains Indians made glue by boiling down the hoofs and the skin of the heads of animals. Perhaps this is the glue referred to in Catlin's account of the making of a shield.

The device or cognizance painted on the shield or its cover is called by Catlin the "medicine or totem" of the owner. Speaking of such devices among the Dakota, Mallery[2] says that they denote the gens of the owner or his personal designation or the marks of his rank. Later investigations show that shield devices among the Plains Indians in general had the character broadly indicated by Catlin rather than that of Mallery's statement. For the Dakota and Blackfoot we have express statements to this effect;[3] and Mooney[4] sums up the information concerning the Plains region as follows, "The shield of the Plains warrior constituted his most sacred possession from the time when it was made for him or given to him soon after his first encounter with the enemy, until it was laid under

[1] Material Culture of the Blackfoot Indians, Anthropological Papers of the American Museum of Natural History, V, 1910, p. 163.

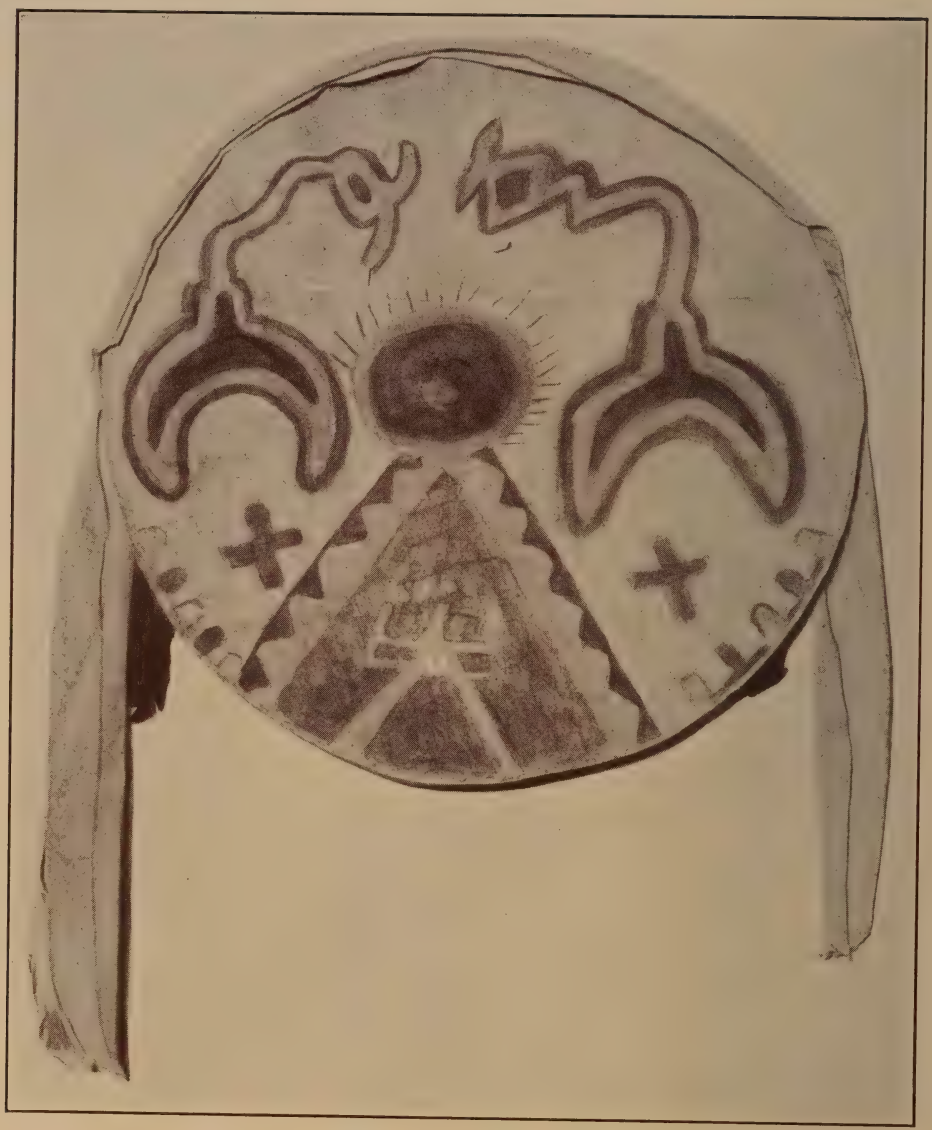
[2] Picture Writing of the American Indians, 10th Annual Report of the Bureau of American Ethnology, 1888–1889, p. 751, Washington, 1893.

[3] C. Wissler, in the papers on the Blackfoot and the Dakota previously cited.

[4] Article "Shields" in the Handbook of the American Indians.

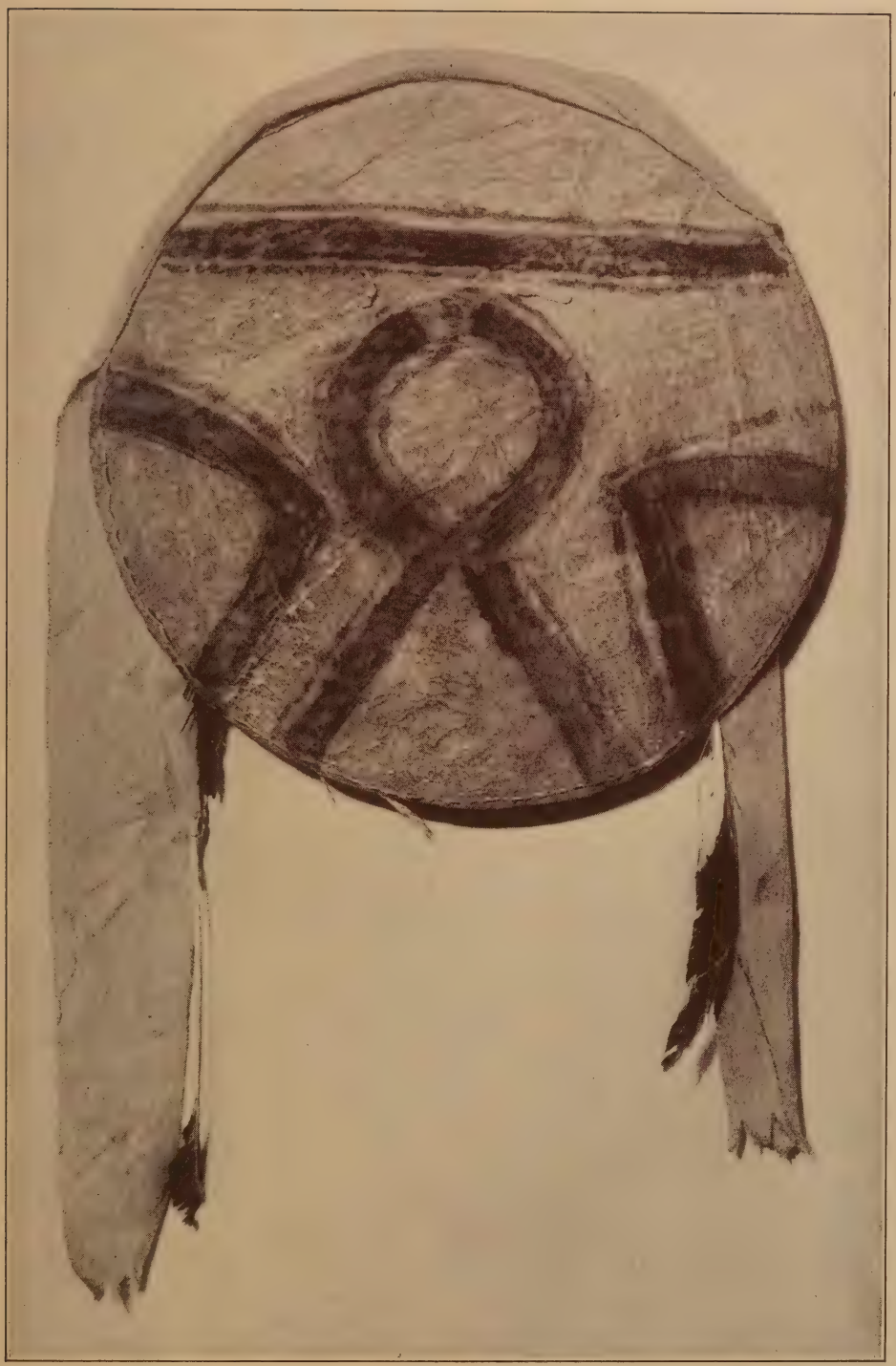
Shield of the White Mountain Apache. The decoration is chiefly in very dark green. Between the rays from the smaller circle are short strokes in red. The dark rays proceed from the heads of upholsterers' tacks driven through the two thicknesses of hide along the circumference of the smaller circle. Between every two of the dark dots along the border of the shield is a red stroke flanked by two dark green ones. The ends of the red flannel band which carries the feathers are fringed with slender cones of thin sheet iron.

FIG. 7.



Shield from New Mexico. The centre is in orange red bordered with green. From this border proceed red rays. The central part of the triangular ornament which is unitary with the sun disc is also in red with the conventional figure in green. The green of the border surrounding the central disc is continued in the inner portion of the doubled dentate ornament which borders the triangle; the outer part is red (orange). The serpentlike objects at the sides are in orange outlined with green; green also are the darker areas near the extremities of these figures, and the borders of the orange crosses. The elements of the decoration along the rim of the shield are alternately in orange and in green bordered with orange.

FIG. 8.



Shield said to be Comanche and to have been used by Geronimo's Apaches. Two thicknesses of hide stitched together round the circumference. The band above is red bordered with green. The chevrons at each side and the circle + triangle ornament are outlined in the same way.

FIG. 9.

his head in the grave, unless before that time bestowed on some worthy younger warrior or left as a precious sacrifice at the grave of wife or child. Every shield originated from a dream, in which the dreamer was told by the spirit how many shields he might make, how they must be painted and decorated, how the owner must paint and otherwise decorate himself and his pony, and what taboos and other sacred obligations he must observe through life in order to obtain the protection of the shield spirit, which might be a bird, a quadruped, a being of the tribal pantheon, or one of the personified powers of nature. The owner rarely made his own shield, but received it from the dreamer, usually an old warrior or recognized medicine man, who made it on request as he had been instructed, for a definite compensation in horses, blankets, or other property. . . . The cutting, painting, and decorating with feathers and other pendants were all matters of much ceremony, in which the maker was assisted by the candidate and by other shield owners, usually those carrying shields of the same pattern. During the progress of the work the young man was instructed in all the obligations connected with the shield, and at its completion the shield was formally consecrated in a sweat-house built for the purpose, and the whole ceremony concluded with a feast. The obligations included certain taboos, prayers, songs, and war cries, with a specific method of caring for the shield when in camp and of uncovering it before going into the fight. When not in use it was hung upon a tripod, usually facing the sun, or tied upon an upright pole."

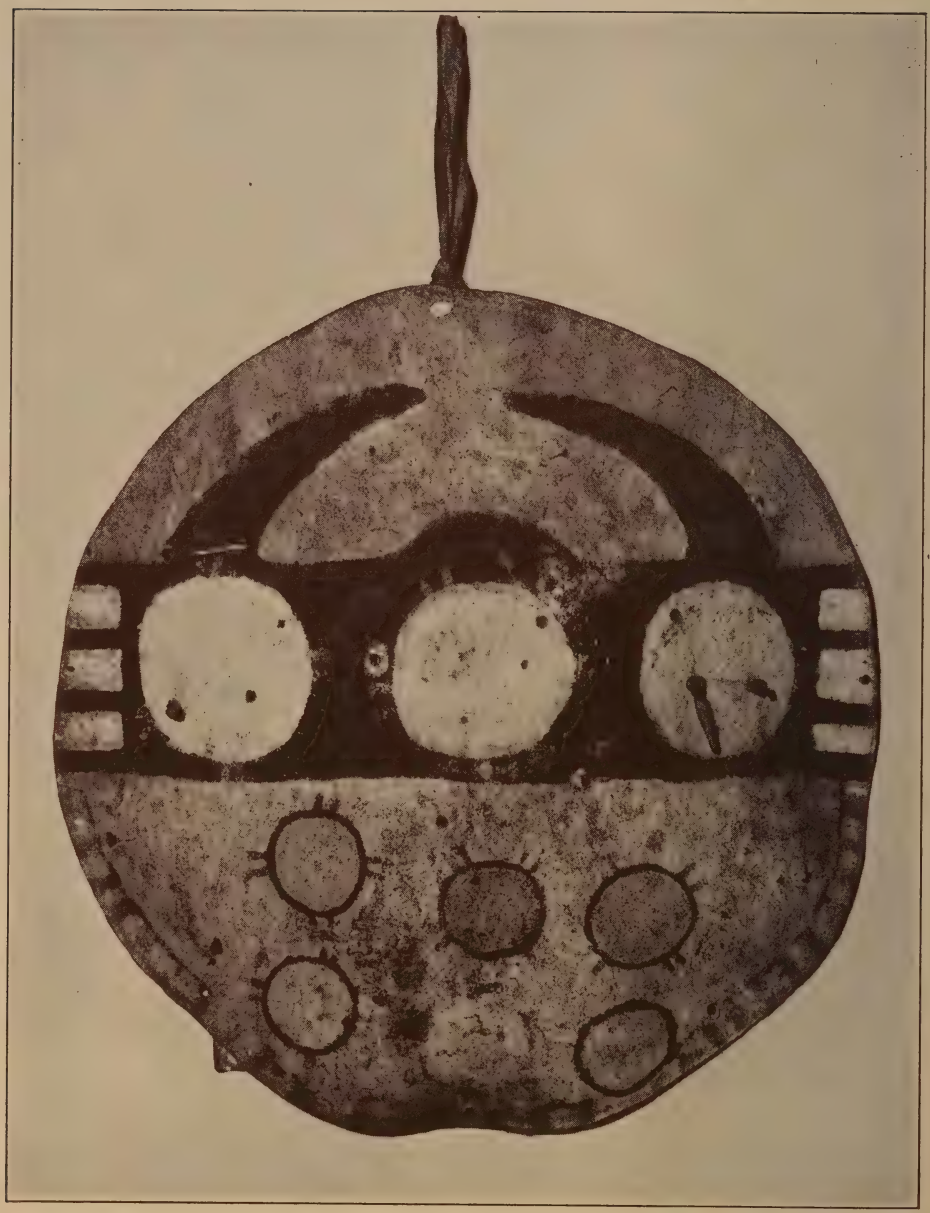
According to Wissler[1] this exposure to the sun was, among the Dakota, reserved for a class of shields similar to the "medicine-shields" of the Blackfoot, which latter were those associated with the most important shield rituals. Both Catlin and Maxmilian of Wied figure shields suspended in this manner.

Almost inevitably, it seems, so far as the shields figured here are concerned, the shape of the field to be decorated imposed upon the designers the nature of their main designs. In nearly all cases these are based on a simple analysis of the circle, and a repetition of the outline of the given circular field. Fig. 7, which is to be regarded as a modified circle, has a central dark circular area from which issue short rays terminating in dots, the latter forming a broken line concentric, in intention, at least, with the outer circumference of the shield. Thongs passed through holes in the hide of which the shield

[1] Some Protective Designs of the Dakota, p. 31.

Shield in cover. Apache. The darkest areas and lines are blue. This includes two of the large triangular areas, the four-pointed stars, the birds, the wavy lines, the rings that lie along these, and the outline, including the triangular rays, of the small circle in the centre of the shield. The large triangular areas at the right of those already accounted for are in order, beginning at the top, green, yellow, and tinged with red. This order is reversed at the left. The lozenges farthest from the centre are red, the others white. The two small circles above the central one are divided each into two yellow, two green sectors. The figure with the cleft top near the small circle at the left is in yellow, the other similar figure is in blue. A few quills of the feathers which were formerly attached directly to the shield cover remain.

FIG. 10.



The principal feature of the decoration of this Plains shield is in dark brown and white, except that the middle circle is in yellow outlined with red. The part of the shield above this has a red border. The small circles below are outlined in dark brown except the middle one below which is a rather vague white area. The two on each side of this are yellow. The middle one in the upper row is green; the other two are red.

FIG. 11.

is made at right angles to each other form discontinuous lines cutting each other at the centre of the shield and dividing the whole area into four sectors. In the case of the two covers of the shield represented in Figs. 3 and 4, we have again the smaller circular areas concentric with the larger, and groups of triangular rays which are in effect narrow sectors, while the whole group of rays in the lower part of the large circle formed by the shield is conceived as a sector, and forms with the central circular area that circle + sector ornament whose genesis as a geometrical form is illustrated in the crossed thongs and circle of Fig. 7, in the quillwork discs of the buffalo robes, shirts, moccasins, tipis, etc., and which appears here again in Figs. 8 and 9, while the manner in which it has originated by the selection of one from all the sectors into which a circle can be divided by a given number of radii is again illustrated in Figs. 2 and 10 with their small central areas and, respectively, four and eight radii.

Even where details or main designs are not obviously based on the circle its influence on the suggestibility of the designer may sometimes be traced. In Fig. 3, the conventional representation of a dragon fly shows the natural uncompromisingly rectilinear outward thrust of wing transformed here into two concentric arcs of a circle, which, though not themselves concentric with the circumference of the shield, are undoubtedly unconsciously conditioned by its circularity, which perhaps may even have suggested also round tips for the dragon flies' tails.

Similarly in the case of the shield, Fig. 11, the curve of the buffalo horns follows that of the circumference of the shield, the boss that rises between them is not merely a slight concession to realism, but more likely, or at least as much, a yielding to the pull of the heavily outlined outer curve. In a case like the bird of Fig. 12, in which there is a determined attempt at realism, the same influence can, I think, be traced in the bold curves of the outline of head, beak and talons, and the sweeping curve of the wings; while the legs are disposed as if the designer wished to make sure that they would fall well within the circle which might be completed by joining and producing the curves of the outlines of the wings and beak.

One of the shields pictured here, Fig. 13, exhibits well what among the Plains Indians is the commonest, and is perhaps the oldest, form of decoration of the shield,[1] namely that in which the

[1] Cf. Wissler, Some Protective Designs of the Dakota; and see the illustrations of old Mexican shields in Mrs. Z. Nuttall's paper in Internationales Archiv für Ethnographie, V, pp. 34–53.

Crow shield with buckskin cover and "medicine." The medicine comprises a disc of leather covered with red flannel surrounded by a circle of beadwork in light and dark blue and yellow, from which depends a tress of human hair; and a plummetlike object (navel amulet?), covered with beadwork in pink, green, light and dark blue bands, to which is attached a piece of bird-skin. The crow is painted in brown, with a green beak. The vertical strokes at the upper and lower circumference are in green, the wavy line (lightning symbol?) in red. The shield is said to have been the property of a certain Boy-that-Grabs, captain of Indian police on a Crow agency in Montana.

FIG. 12.

Shield from Jemez, New Mexico. Decorated with concentric rings of red, green, yellow, green, red, yellow, in that order starting from the rim. The other colours have been put on over a green ground. The rays of the central sun disc are yellow; its central area is green. The four lozenges, which are perhaps feather symbols, and hence symbolic also of sun rays, were originally painted white over green, and bisected longitudinally by a line of the same dark brown colour which separates some of the rings on the shield. According to a note by J. Mooney, this shield may be either Navajo or Pueblo.

FIG. 13.

whole obverse is covered with concentric rings. This comes from New Mexico from the pueblo of Jemez and is a good old example. Two of the shields pictured on the Dakota buffalo robe described elsewhere in this issue of the JOURNAL are decorated in this simple fashion, and the means employed to fasten together the two thicknesses of hide of which the shield, Fig. 14, is made, affords an example of a similar form of decoration without the use of colour. Three other shields in the group, Figs. 8, 9 and 15, from this southwestern region, one of which is said to have been Comanche in origin and to have been used by Geronimo's Apaches (Fig. 9), are evidently influenced by other Pueblo modes in the decorative forms employed and the use of colours. The same thing is perhaps less obviously true of the decoration of the cover of the Apache shield, Fig. 10.

One of the shields of southwestern origin bears in duplicate on each side of the central sun ornament the representation of what appears to be a serpent with a cross just outside the opening of its gaping jaws. At first sight this looks like a modern attempt to copy some published restoration of the great serpent mound of Ohio. But on this assumption it is not easy to account for the cleft tail (or second head) and the fact that the cruciform figure which would represent the so called altar of the Ohio mound is placed without the opening of the jaws, or that this figure is a cross at all. I do not know of any of the proposed restorations of the serpent mound which show these features. (Fig. 8.)

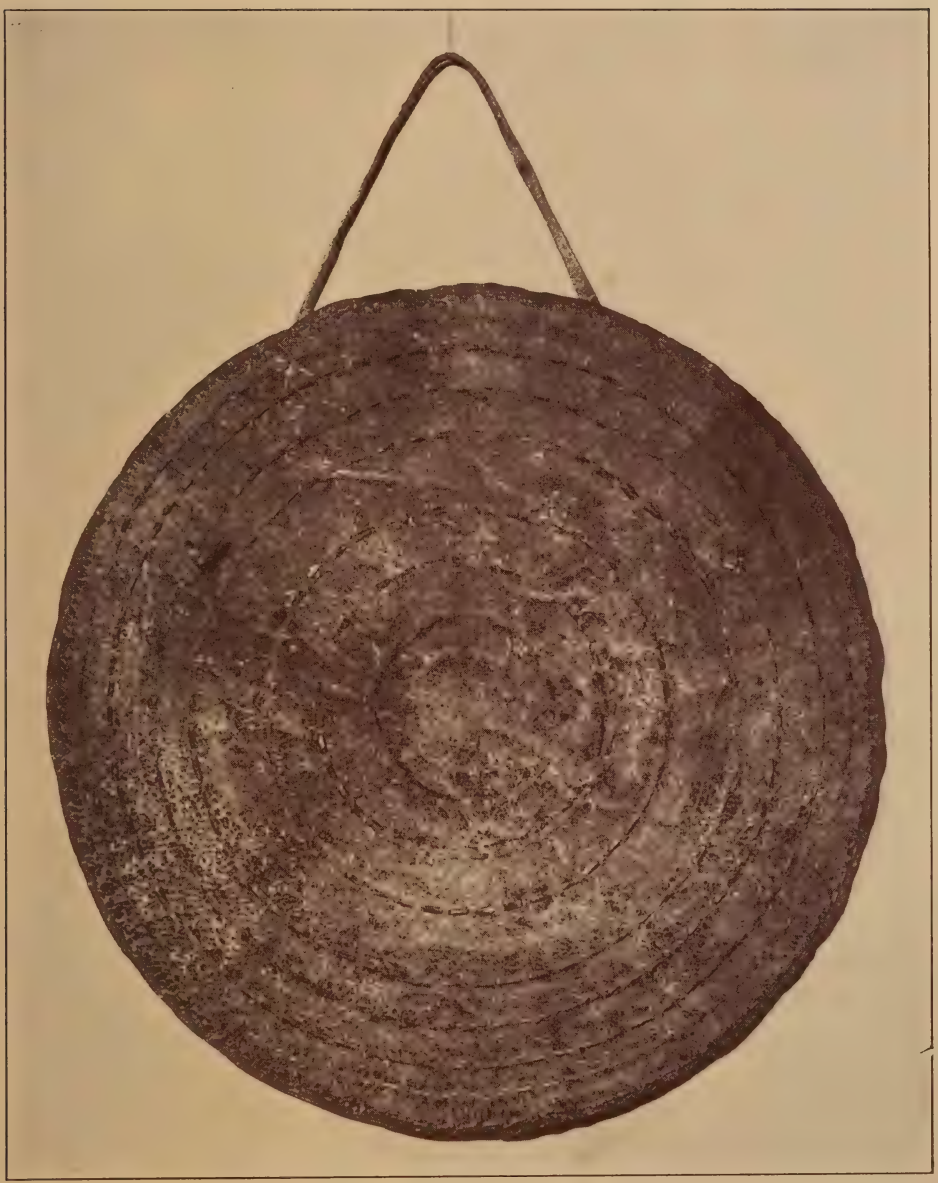
The shield which appears here as Fig. 16 is one of the oldest in the MUSEUM'S collections. It is a Pima shield and was collected by F. W. Hodge in 1887. It was among several old shields in this Museum which were examined by James Mooney some years ago. He left the following note on a tag attached to it.

"Collected by F. W. Hodge (Bureau of American Ethnology) from Pima warrior in Salt River valley, Arizona, 1887, and later presented to Philadelphia Museum. Arrow hole from Apache in face. Figured in Wilson's *Swastika*[1] and from that to Russell's Pima paper[2] in Report, Bureau of American Ethnology.

"[The] swastika is [the] Pima tribal totem, property mark, and cattle brand. From analogy with Plains symbolism [it] probably

[1] Thomas Wilson, The Swastika. Report of the U. S. National Museum for 1894, Fig. 258.

[2] The Pima Indians, Annual Report of the Bureau of American Ethnology, XXVI, p. 122. Washington, 1908.



Shield composed of two thicknesses of hide held together by thongs.

Fig. 14.

Shield, New Mexico. On a field originally yellow is painted a band of red crossed longitudinally and also bordered by lines in green. Extending upwards from this band is a red triangle bordered with green between two similarly outlined M shaped figures; extending downwards are five triangles like the one above. A similar triangle between two bands following the circumference of the shield halfway is placed at the circumference below. To the apex of the second triangle from each end of the row of five is attached a figure in the form of an inverted T, red outlined in green.

FIG. 15.

here symbolizes and invokes spirit protection from [the] four cardinal points."

The authority for the statement about the hole in the shield at the end of one arm of the swastika is given by Wilson as follows, "This shield is the property of Mr. F. W. Hodge, of the Bureau of Ethnology. He obtained it from a Pima Indian in Arizona, who assured him that the hole at the end of the lower arm of the Swastika was made by an arrow shot at him by an Indian enemy."[1]

Only remarking that the word totem was probably used by Mr. Mooney in a wider sense than would be advisable to-day to mean something like an amulet or charm; and that analogies like the one suggested are often misleading in view of our vague and partial knowledge of the symbolism of both these regions, I will pass on to quote from Russell's account of the Pima one of the few descriptions we have of the Indian use of the shield in actual fighting.

"The fighting men were divided into two parties, those who used the bow and those who fought with club and shield. When advancing upon the enemy, the warrior crouched so that the comparatively small shield protected his entire body. He also leaped from side to side for the double purpose of presenting a more difficult target and of bewildering the enemy and thus unsteadying [sic] their nerves through the suggestion of magic. . . . The shield, with its magic symbols in brilliant colors, is kept in rapid motion not only from side to side but also revolving by the reciprocal twist of the bearer's forearm."[2]

The shields were of rawhide like the one figured. The clubs were short and heavy, made of mesquite and ironwood. "Their appeal to the God of War was expressed by the sun symbols that decorated the shields. . . . Crouching low, springing quickly with whirling shield that concealed the body, in feather headdress and battle colors, they must have presented a terrifying spectacle."[3]

Incidentally, it may have been noted, in connection with the remarks quoted concerning this shield, we have had three, or at least two, conflicting explanations of the symbolical values of designs upon Pima shields. If the word totem, as employed by Mooney, means nothing more than an amulet or charm, we may eliminate one conflicting factor, as his explanation might then be taken as coinciding

[1] The Swastika, p. 901.
[2] The Pima Indians, p. 120.
[3] Loc. cit., p. 202.

Shield of the Pima Indians of Arizona. The device is a swastika originally painted in white outlined with red.

FIG. 16.

roughly with Russell's "magic symbols." But Russell has another explanation which it is not easy to reconcile with his own previous statement. In the passage last quoted the "sun symbols" of Pima shields express an "appeal to the God of War," that is, I suppose, a prayer to this deity. In this case they can hardly be regarded as implements of magical procedure. From the terms in which this last statement is couched it would seem that the swastika, as being one of the symbols that decorate Pima shields, is to be regarded as a "sun symbol." This would not accord very well with Mooney's inference. The whole situation is, perhaps, fairly representative of the thorny ground to be traversed by interpreters of Indian symbolism. Probably the explanation which rests on principles of magic not unlike those which appear to underlie the shield decorations of the Plains Indians is most likely to be near the truth.

As we have seen, three of these shields are said to be Apache or to have been used by Apaches (Figs. 7, 9 and 10). The use was probably no more than ceremonial in two cases, at least. The shield of which Fig. 10 shows the cover may have been a practical arm of defence. "The Apache were the hereditary foes of the Pima from earliest tradition, and though they were no better fighters than their peacefully inclined desert brothers, the latter were constantly harassed through dread of sudden attack. The Pima, however, retaliated and learning that the Apache were early sleepers as well as early risers, would often strike a sleeping camp before the waning moon had risen, retreating from the mountains by its pale light ere the Apache could rally in the streaking dawn."[1]

[1] E. S. Curtis, The American Indian, II, p. 8.

THE EIGHT IMMORTALS

As they appear on a Ming Pottery Jar of the Cloisonné type, in the University Museum Collection.

THREE MING POTTERY FIGURES

By Helen E. Fernald

VISITORS to the University Museum have noticed for some time past a group of three pottery statuettes in the Chinese section. The sturdy proportions of these figures and their vigour of modelling holds the attention, while the eye is delighted with the magnificence of the coloured glazes which they display. They are ornaments pure and simple, the work of craftsmen who could model with spirit if not always with great skill, and who knew the decorative value of the rich blue, purple, turquoise, and green glazes they handled. The deep violet blue which is the principal colour used on these figures reminds us of a Limoges enamel it glows with such depth and richness.

The two standing figures are companion pieces and represent two of the Eight Immortals of Taoist legend, Lan Ts'ai-ho and Lü Tung-pin. Lan Ts'ai-ho is the plump boyish looking one with his hair tied in two knobs like short horns and a girdle and shawl of leaves over his robe. He carries in his hand a basket of flowers which is the attribute by which he may be recognized. Flesh parts, face, hands and feet, are left in the biscuit, that is, the bare pottery, but the rest of the figure is covered with the rich coloured glazes mentioned, deep blue for the robes and brilliant turquoise for the accessories. Even the base which represents rocks is in the same colours. A touch of aubergine on the lotus flower in the basket is the only instance of the use of another colour. The statuette of Lü Tung-pin is fully as magnificent. He is represented as a man of considerable dignity, wearing a goatee and a high court headdress. Around his hips over his rich blue robe he wears a short skirt of turquoise which may represent armor. His attribute is a sword and this may be seen carried on his back over the left shoulder. Here again the face is left in the biscuit, but the hands are folded inside the turquoise sleeves of the inner robe and the feet are shod with well shaped court shoes. The garments of both figures flare out in a peculiar way at the bottom showing the turquoise lining and long turquoise trousers, and from the back of the pedestal a flat scroll form rises up to meet the hem of the robe and give added support to the figure. Doubtless these two once belonged to a complete set of the Eight Immortals.

The third statuette is that of a powerful man, some high dignitary or official, seated on a low oblong bench in the imposing attitude usually associated with the figures of Wen Ch'ang ti chün, the chief God of Literature. This important personage sits solidly with knees far apart and arms wrapped in his mantle and folded in majestic mien worthy of an emperor. The head is set proudly on the shoulders. All faults in the modelling are lost sight of in the presence of such strength and vigour of handling as are shown here. As in the case of the other two figures the robes are of a glorious deep blue and details are carried out in turquoise. Here, however, the turquoise occasionally runs into a leaf green as brilliant and fresh as itself. Indeed the lighter portions of the headdress are entirely in this green. Warm ivory is another glaze not appearing on the other two figures. The ornaments in the front of the cap are of ivory and an ivory lining of the robe is revealed at the hands where the folds fall back across the knees. The face too is different. It has been heavily gilded and the gilt has tarnished giving an effect of polished bronze.

This type of pottery figure was first made in China, so far as we can learn, in the fifteenth century, though its beginnings are to be found much earlier. It is not a development from the T'ang grave figurines as one might suppose but seems to have had quite a different origin. From the earliest times in China there had been tile factories in nearly every town and village, kilns which supplied the local demands for roof tiles and decorations. By the Ming period these tiles were nearly always glazed, the colours usually being green, blue, yellow, aubergine or white on a buff pottery body. Probably the most famous tiles are those from the "Porcelain Pagoda" at Nanking, a structure built between 1412 and 1431 and destroyed in the T'ai-p'ing rebellion of 1853, and those from the Ming tombs near Nanking which date about the same time and were also destroyed in 1853. Tiles intended for roof finials and antefixal ornaments were often surmounted with decorative figures modelled skillfully in the clay. Ridge tiles carried the spirited forms of heroes, the Eight Immortals, other Taoist deities, men on horseback, dragons, phoenixes, and so forth. Modern collectors have sometimes detached these figures from their tiles and mounted them on stands, as may be seen in the case of a set of the Eight Immortals in the Kunstgewerbemuseum in Frankfort (Illustrated in Schmidt, Chinesische Keramik, Pl. 89). Some have remained attached to the tile, as in the

Seated Pottery Figure of the Ming Dynasty.
Covered with rich blue and turquoise glazes with touches of ivory and green. Face gilded.
Height: 19½ inches.

case of the little Bodhidharma of the Benson Collection (Illustrated in Hobson, Chinese Pottery and Porcelain, Vol. I, Pl. 58, No. 3). From such decorations for the exterior of palaces and temples it was but a step to make the separate figures to serve as ornaments for the interiors. Many were made on the same scale as the tile figures which were ordinarily ten to fifteen inches in height. The Eight Immortals of the Benson Collection are about fifteen inches high. But there are a number of well known examples that are considerably larger than the tile ornaments and that reveal a degree of skill in plastic art that one would hardly expect to find at a tile factory. Among the finest known are those in the Grandidier Collection at the Louvre which are about the same in size as the figures belonging to the University Museum. The Benson Collection, sold in 1924, was perhaps the richest in these figures. A standing Kuan-ti, thirty one inches high, was one of the finest and there were also two statuettes of Buddhist priests that were exceptional. In this technique also are several famous figures of Kuan Yin, among them a lovely one in the Eumorfopoulos Collection in London. Probably the largest example known of this class of pottery is the statue of a Judge of Hell in the British Museum. It is four feet six inches high.

Not all of these figures are of the same material or even covered with the same glazes as those in the University Museum. Indeed, being the product, probably, of various local factories throughout China it is surprising, rather, that there should be so much uniformity. Clays may be yellow, red, buff, or gray. Many of the works mentioned above show green and yellow glazes with aubergine, a sort of pinkish purple, making a colour triad that is very pleasing, but perhaps not as satisfying as the deep blue and turquoise colour scheme. The range of colour was limited by the nature of the glazes and the peculiar technique employed. This enamel on biscuit ware as it is called was produced by means of a different method from that which was being developed in the making of porcelain at Ching-tê Chên, the great ceramic center of China in the Ming period and later. There the porcelain body was made of a kind of clay called kaolin, or China earth, mixed with petuntse, China stone, which will become fusible only at a very high temperature. Colour or painted decoration was applied to the surface and the whole was dipped in a colourless glaze the chief ingredient of which was petuntse. Then the piece was put into a high temperature kiln and exposed to such intense heat that body and glaze were fused into one homogeneous

mass, hard, white, resonant, and translucent, a material which when broken showed no line of demarkation between body and glaze. These figures, on the other hand, and the tiles and other potteries related to them, had to receive two firings, one for the clay body and the other for the glazes. The ordinary tile clay was used for the modelling, in this case a heavy reddish buff. The bases were hollow and there was a hollow core going up into the figures designed for greater safety in firing. The process was as follows. The clay body was fired in the high temperature kiln and came out a heavy earthen- or stoneware which was said to be "in the biscuit state," which merely means the fired pottery before the glaze has been put on. The coloured glazes were then applied, usually with a brush, and the piece was fired a second time but this time in the cooler parts of the kiln since these glazes have much lead in them and could not stand a high temperature. It is for this reason that the French call them "couleurs de demi-grand feu." It will be seen from observation of these three figures that when these glazes touch they tend to overlap and run into each other along the edge. This fact was probably what led to the employment of a peculiar technique in the case of a class of Ming potteries closely related to these figures. We refer to the class known as the cloisonné group. The University Museum has several examples of this type of pottery, large wine jars of strong and dignified form. One of them is of special interest to us not only because of its strong affiliations with these statuettes in regard to material and technique but also because there are depicted upon it the Eight Immortals with whom two of our figures are concerned. This jar is of heavy buff pottery. The designs upon it are outlined in raised threads of clay which contain the coloured glazes as the cloisins do the enamels in cloisonné. These clay threads serve as barriers and keep the glazes from running together. Here is the same biscuit body, the same deep blue and brilliant turquoise "couleurs de demi-grand feu" with the addition of yellow, green, and aubergine. Even the faces of the little figures are left in the biscuit. Can these also be by-products of the tile factories?

During the Ming period certain subjects for decoration were popular almost to the exclusion of all others. The subject of longevity especially fired the imaginations of the potters and inspired their art. The emblems of long life, the crane, the ling chih fungus, the pine tree, the peach of immortality, the long haired tortoise,

Ming Pottery Figure of Lan Ts'ai-ho.
Covered with deep blue and turquoise glazes.
Height: 21½ inches.

and the spotted deer appear over and over again together with scenes depicting Shou Lao, God of Longevity, receiving court from the Eight Immortals in his mountain paradise or being congratulated by them. Sometimes the Immortals are seen crossing the sea on their way to visit Shou Lao, Wang Chih, the Chinese Rip Van Winkle, is represented watching the game of chess, or the scene shows the three Star Gods of Longevity, Rank, and Happiness seated around a checkers board. In view of the fact that two of the pottery figures we are studying belong to the Eight Immortals it may not be out of place to consider the whole set as depicted on the jar mentioned above. Most books on Chinese pottery and porcelain give a list of the Eight Immortals and their attributes but it will be found convenient as well as perhaps interesting to repeat various items here.

On one side of the jar are represented the three Star Gods sitting around a checkers board. To the right of them and proceeding around the jar in that direction we may distinguish the Eight Immortals as follows:

Lan Ts'ai-ho with a girdle and shawl of large leaves. He wears his hair in two knobs and carries his emblem, a basket of flowers, in his right hand. The left hand holds a ling chih fungus. (The left hand of our statuette is raised and pierced as if it also held such a fungus once.) Lan Ts'ai-ho is sometimes represented as a girl. A case of this may be seen in the painting numbered 29 in the Museum Collection where the slender graceful figure of a young woman with a basket of peony flowers makes a charming subject for an exquisite example of line rhythm.

Chang Kuo Lao was supposed to have lived in the early eighth century. He was renowned as a necromancer and had a magic white mule on which he traveled enormous distances and which he could fold up like a piece of paper and put in his pocket when not in use. He was once ordered to appear in court but refused to go. His emblem is a Taoist musical instrument consisting of a bamboo cylinder and two rods with which to play it. The rods are sometimes shown inside the cylinder. Chang was the patron of artists and calligraphers, a fact which supplies us with an interesting side light on the Chinese idea of the nature of the power possessed by painters and writers.

Ho Hsien Ku, who lived in the seventh century, was a girl who is said to have spent most of her time wandering alone in the hills.

By eating of the powder of Mother of Pearl she obtained immortality and thereafter she rejected the food of mere mortals. That a being who would eat nothing but Mother of Pearl should be adopted as the patroness of housewives would seem most inappropriate. Certainly her mode of life was hardly such as would lend itself to imitation on the part of many housekeepers. Perhaps the point is, rather, that she would assist housewives to cook "heavenly" food. Her emblem is the lotus, usually in the seedpod stage, but occasionally she carries a spoon. She is shown here dancing gaily to the rhythm of T'sao's castanets.

T'sao Kuo-ch'iu was the nephew of the Empress Tsao Hou and lived about the year 1000 A. D. He was therefore one of the last to join the band of the Eight. He is always dressed in court robes and wears an ancient court headdress with wings, or streamers. A pair of castanets was his symbol. He is the patron of actors. On this jar he may be seen dancing while he plays.

Han Hsiang-tzu, who was a pupil of Lü Tung-pin, was taken by his teacher to the Taoist paradise. There he climbed the peach tree of Immortality but had a fall from its branches. He is often represented wearing his hair in two knobs, like Lan Ts'ai-ho. His symbol is the flute and he is the patron of musicians.

Lü Tung-pin, a most popular Immortal, was born in 755 A. D. It is said that while he was serving office as district magistrate he one day met Chung-li Ch'üan in the mountains and from him learned the secrets of alchemy and the mysteries of the elixir of Immortality. He was subjected to ten temptations, but overcoming them all was given a magic sword with which he slew dragons and other monsters throughout the empire. This performance continued for about four hundred years after which he disappeared. His emblem is the sword which he usually carries on his back. Probably the most famous representation of Lü Tung-pin is the magnificent ninth century painting which hung for many years in the Cernuschi Museum and is now on loan to the Metropolitan Museum. In it the human side of the worthy is emphasized, not his magic immortal self. Another painting which has also been in the Cernuschi Museum bears an inscription purporting to be a revelation obtained by Lü Tung-pin by the magic method of making the pencil descend, a sort of spiritualistic performance of the Chinese.

Chung-li Ch'üan is usually represented as a fat man holding a fan. He is one of the oldest of the Immortal Eight for he is said to

Ming Pottery Figure of Lü Tung-pin
Covered with deep blue and turquoise glazes.
Height: 21½ inches.

have lived during the Chou dynasty. He is the Chinese philosopher who figures in the ironic story of the widow fanning her husband's grave, so deliciously told by Hetherington in his Early Ceramic Wares in China. The sequel to the story is that Chung by his magic power assisted the lady in drying the sods on the grave and was rewarded with the present of the fan. Hence the emblem by which Chung is recognized.

Li T'ieh-kuai is perhaps the artists' favorite Immortal. Legend states that Lao-tze himself used to summon him to the spirit world and there instruct him in Taoist lore. In order to go Li T'ieh-kuai had to leave his body, and it happened that once he returned to find that his body was gone. Luckily he came upon a lame beggar on the point of expiring by the roadside and thereupon entered the body which the beggar was vacating. After that he continued his existence in that form. His attributes are the beggar's crutch and a pilgrim's gourd out of which he can conjure clouds and apparitions, and when his spirit goes visiting it may be seen running along the stream of light which emanates from the gourd. He is the patron of astrologers and magicians.

Such was the merry band which in China held something of the same place that the nine muses did in Greece, and probably claimed far more of the popular favor. This worship of Longevity, of the great age of the body, inspired an art that was intensely expressive of itself. It led to a realism that seldom appears in Chinese art except under Taoist influence. There is in it none of that mystical spiritual feeling expressed by the Buddhist artists in their works, none of the matter of fact dignity and pride in respectability seen in paintings made under Confucian patronage. Rather is there a quaint gnome quality that is akin to the folk lore of northern Europe. Wizards, dwarfs, little old men of the hills with long beards and matted hair, witches and half witted boys with old faces, these were the subjects that kindled the fancy and led to an emphasis of the physical indications of age, bent or distorted forms, wrinkled old faces, a wild and unkempt appearance. Even in these pottery statuettes there is a touch of the physically uncanny.

It is true that neither in technique nor in subject matter are the figures in the University Museum unusual. The seated figure very probably does represent Wen Ch'ang ti chün and as such was another favorite subject of the Ming potters. But in respect to their size and beauty these figures are rather exceptional. In this

they may be compared to the famous examples in the Grandidier Collection already mentioned. There is in that collection a Lan Ts'ai-ho extremely like this one. The head is larger, the basket is held on the arm, and the position of the hands is different, but the garments are identical and treated in the same manner and with the same pecularities of modelling as if the same hand were responsible for both. Close affinities exist also between the seated figure and a fine group in the Grandidier Collection representing a person of rank mounting a horse which is held by a groom.

The art of the Chinese potter has put him in the first rank among the craftsmen of the world. Some of his products are classed with the most beautiful works of art known. How shall we regard these by-products of his, these figures of his fancy whose forms he fashioned with but little knowledge, but into which he breathed a spirit that was full of life? All of these figures reveal grave anatomical defects when studied. The lifelike expressions of the Lan Ts'ai-ho and the Lü Tung-pin are due to the treatment of the eyeball and to the open mouth rather than to any understanding of the structure of a face. In the case of the seated figure the proportions of the body are incorrect from the waist down. It is a triumph of the artist's spirit that such defects of construction should pass almost unobserved in the presence of the splendid sincerity and strength of the work. The biscuit parts of the two standing figures have been covered with a thin white slip, or coating of fine clay, and then painted to represent flesh, a colour now turned a dull yellowish brown. Black paint is used for pupils of eyes and for Lü Tung-pin's goatee and mustache.

The rich colours of the glazes must be seen to be appreciated. The blue has great depth and richness and shows a high enamel like lustre where it is thick. Only here and there has it crackled at all. The turquoise is very brilliant and displays a fine even crackle, as does the ivory of the seated figure. The green is as smooth as jade and shows no crackle at all. An interesting feature is the gilding of the face in the one example. Gilding was frequently practiced in Ming times and involved an extra firing. It was done last after the figure was otherwise finished. Gold was put on in the form of gold leaf or the gilt applied with a brush (the latter method was probably the one employed in this case) and the gilt was then fixed by exposing the figure to the heat of the muffle stove, a low temperature kiln. It is therefore interesting to note that this seated figure has been given three firings in all, the first very hot, the second medium, and

the third comparatively cool. Such gilding increased the richness of the work without making it gaudy, for ordinarily only the face was so treated. As a rule Chinese pottery shows a fine sense of colour proportion and harmony with one colour decidedly predominating.

Thus it may be seen that while these three figures are tremendously interesting as examples of a certain type of Ming pottery, and quite intriguing from the standpoint of subject, it is upon their artistic merits that we judge them worthy to hold a place in this collection. Applying here the same standards that we should apply to examples of mediaeval craftsmanship in Europe we find many characteristics analogous to those seen in Gothic wood carvings, thirteenth century stained glass, or fourteenth century enamels, a fine feeling for design in line, strength rather than delicacy, significance of attitude, and rich glowing harmonious colour. All these we have in these Chinese figures which are so nearly contemporary.

SOME CHINESE GRAVE FIGURES

By Helen E. Fernald

I

Introduction

MENTION was made in a recent article in The Museum Journal[1] of some Chinese grave figurines which have been in the possession of the Museum for several years. Many of them have not hitherto been published and in view of the fact that a number of archaeologists have started investigations in this particular field—that of Chinese tomb figures—and because of the growing interest on the part of the public in these fascinating statuettes it would seem timely to describe them now. These examples are small, some of unusual type, others quite well known. There is a set of nine female figures representing dancers, musicians and attendants, a group of five ladies standing, two ladies sitting, a quartet of men in Tartarish costume and two others in similar dress. They are delightful objects artistically and none could be more stimulating to the curiosity or surpass them in human interest.

The practice of putting clay figures in the graves as substitutes for real things or living persons has been discussed in the article referred to above. In connection with the origin of this custom it may be of interest to include here a poem from the Shih Ching (She King), the ancient Chinese Book of Poetry collected by Confucius. It is a lament which was written soon after 620 B. C. It tells of the burial alive of three noble brothers, officials of the duke Mu, who died in 620 B. C. and in whose grave they were entombed in accordance with the ancient custom. Dr. James Legge, whose translation of the poem we give here, says that "in all 170 persons were buried with Mu."

The Hwang Neaou

They flit about, the yellow birds,
  And rest upon the jujubes find.
Who buried were in duke Muh's grave,
  Alive to awful death consigned?

[1] The Museum Journal, September, 1925, Mortuary Figures of the T'ang Dynasty.

'Mong brothers three, who met that fate,
'Twas sad the first, Yen-seih, to see.
He stood alone; a hundred men
Could show no other such as he.
When to the yawning grave he came,
Terror unnerved and shook his frame.

Why thus destroy our noblest men,
To thee we cry, O azure Heaven.
To save Yen-seih from death, we would
A hundred lives have freely given.

They flit about, the yellow birds,
And on the mulberry trees rest find
Who buried were in duke Muh's grave,
Alive to awful death consigned?

'Mong brothers three, who met that fate,
'Twas sad the next, Chung-hang, to see.
When on him pressed a hundred men,
A match for all of them was he.
When to the yawning grave he came,
Terror unnerved and shook his frame.

Why thus destroy our noblest men,
To thee we cry, O azure Heaven.
To save Chung-hang from death, we would
A hundred lives have freely given.

They flit about, the yellow birds,
And rest upon the thorn trees find.
Who buried were in duke Muh's grave
Alive to awful death consigned?

'Mong brothers three who met that fate,
'Twas sad the third, K'een-foo, to see.
A hundred men in desperate fight
Successfully withstand could he.
When the yawning grave he came
Terror unnerved and shook his frame.

Why thus destroy our noblest men,
To thee we cry, O azure Heaven.
To save K'een-foo from death, we would
A hundred lives have freely given.[1]

[1] Dr. Legge's system of spelling is different from that in general use now. According to the great dictionary of Dr. Giles the names in this poem would be spelled Huang Niao, Mu, Yen-hsi, Chung-hsing, and Chên-hu.

That the horror of this custom was keenly felt by the people can readily be surmised from this poem. A hundred years later Confucius had the courage and good sense to condemn the practice and gradually it was abandoned in favor of wooden or clay images which represented the sacrifices and offerings. The Historical Records tell us, however, of a great and spectacular reversion to the custom at the death of Ch'in Shih Huang Ti in 209 B. C. when that tyrant ruler was buried in magnificent state and splendour in Mount Li. All the inmates of his harem and all the workmen on the great mausoleum were entombed with him.

By the third century A. D. the substitution of clay figures was well established. Such large glazed figures as were described in the September number of the JOURNAL were part of the funeral furniture of the wealthy and prominent. But persons of lower station in life had their retinues too, carried out in smaller less pretentious figures but often quite as large numbers of them. Whole processions of these figures may be seen in some Museums. There is an old saying in China to the effect that "The most important thing in life is to be buried well." It would be interesting to know whether the objects in a man's grave always represented the wordly possessions he had actually had or were merely those he had wished for. Did he possess in life the large retinue with which he provided himself for the next world? It is certain that these figures were made by grave potters who turned them out of moulds by the hundred. Some individualism was given each, it is true, by the addition of ornaments and accessories and by the painting or glazing but it is seldom that we see anything approaching portraiture except in the large statuettes of the wealthy. There certain of the ladies and officials bear signs of having been made to represent definite persons, probably of the household or among the friends of the dead. Ordinarily I think we may assume that the man before his death or the family afterwards went into a shop and picked out from the stock figures as many as he could afford.

Many grave figurines dating from the Han and Wei dynasties have been found, but the great majority so far excavated have come from tombs of the T'ang period. Also in some localities the custom survived even into Ming times. But the period during which the use of these figures was most prevalent was, roughly speaking, from the sixth to the eleventh centuries. Five hundred years they cover and more. The smaller figurines are some ten inches high, usually, bearing traces of the paint or glaze with which they were originally

A Set of Nine Pottery Grave Figurines Representing Dancers, Musicians and Attendants.
From a Grave of the T'ang Dynasty.
Height: 10½ inches.

covered; the princely figures may be twenty five to fifty inches high. The glazes are amber, cream and green with the occasional use of blue. These statuettes represent men and women mounted on horseback, warriors and tribute bearers, horses, camels, oxen, pigs, dogs, sheep. There are grooms and other servants, armored Guardians of the Four Quarters, t'u kuai or earth spirits, ministers in their official robes, ladies of high rank and of low rank standing or seated, dancers, musicians, actors,—even pedlers. They offer unrivalled material for the study of the daily life of the Chinese people during the period they cover, especially in the matter of costume, of methods of hair dressing, and accessories of all kinds such as utensils, weapons, boxes, stools, dishes, musical instruments, and so on.

Little progress has been made in the dating of these figurines inside of the general period to which they belong. There is without doubt a gradual development of which we can even now see the outline. We can usually distinguish the earlier Han and Wei examples and the decadent types that came after T'ang. But within the T'ang dynasty itself, although it is a period of 228 years (618–906 A. D.), not much differentiation can yet be made. It is interesting to note that among the figures described at this time there are several which very probably belong to the years when the custom had become only a lingering survival in certain localities.

II

Set of Lady Musicians, Dancers, and Attendants

Among the figures in the University Museum is a set of nine little ladies bearing musical instruments and other objects, or wearing the long sleeves characteristic of the dancer's costume. They are standing dressed in long tube like gowns of "Empire Style" with straps over the shoulders, which are worn over close fitting jackets with round necks and long tight sleeves. Their necks are slender, heads small, and the features rather pinched with eyes half closed and lips pursed. It is evident that the same mould was used for them all as they are exactly alike except for the arms and the accessories. Variations in height or inclination of the head are due to the vicissitudes of mending in each case. The figure carrying the coffer and the one clapping her hands are the only ones that

have not suffered decapitation at some time in their careers. A puzzling feature in most of these grave statuettes is the headdress. Just how much is hair and how much hat—or rat? The members of this group seem to have their hair combed straight up behind and puffed out high up over the ears, while on top, well toward the front, rests a peculiar little flat cap made apparently of folded cloth with the loop of a bow on the right side rising like a short horn and a flat pad of the cloth directly above the forehead. The arms, which were attached to the model after it had come out of the mould, are merely long thin rolled pieces of clay bent to represent elbow and wrist, the hands roughly indicated in the attitude required in each case. All of these figures are of the white pipe clay so commonly used for the purpose. The bodies are hollow and made in two sections joined half way up. One is reminded of a piece of pipe closed at one end and ornamented with a head. These little white clay figures were all dipped in a colourless glaze which has, nevertheless, a decided celadon green tinge where it is thickest, as in the grooves and hollows of face and hair. This glaze ends in an even line about an inch and a quarter from the bottom of the skirt. From this fact, together with the observation that the glaze is thickest on the head, we would conclude that the figures were dipped in the glaze upside down and fired in that position. The glaze is finely crazed all over and the innumerable brownish lines running over the otherwise white figures give them a warm creamy tone. It is a most attractive set. No. 2 is probably a bearer of some offering. One of the figures in the avenue before the tomb of Emperor Jên Tsung, who died in 1063 A. D., carries a casket almost identical with the one here represented.[1] Chavannes calls him a "bearer of tribute." In a private collection in New York a small horseman, a tomb figurine, may be seen with a casket somewhat similar in his hands. It has a rounded cover, however, instead of the bevelled edge. No. 4 plays a five stringed lute, No. 5 a harp, No. 6 is clapping her hands, and Nos. 7, 8 and 9 are dancers wearing the long narrow sleeves which were waved about like scarfs in graceful movements during the performance. No. 1 carries some object which is badly broken and hardly recognizable but which suggests a fan. We know that attendants of princes did carry fans and fly whisks. In a relief of Pin-yang Grotto at Lung-men we see Prince Vicvantara and his wife represented as bidding farewell to the king and his prime

[1] Chavannes, Mission Archaeologique, Plate CCCXI, No. 498.

minister and both the former carry what appear to be oval fans.[1] Some of the wall paintings at Tun-huang show Boddhisattvas carrying fans with straight bases and curved tops,[2] and in a relief at the top of the Wei stele of 551 A. D. in this Museum the seated figure on the right holds in his hand a fan or whisk which shows a strong similarity to what is left of the object carried by No. 1.[3] In the scroll painting attributed to Ku K'ai-chih called "Illustration of the Poem of Lo shên," a goddess holds a fan from the top of which wave two plumes.[4] Perhaps figurine No. 1 was holding a fan with just such feathers and it was one of these feathers which was touching her cheek, for a broken piece of the object she is carrying may be seen along the left side of her face. The object carried by No. 3 appears to be the same thing although this figure evidently represents a dancer as may be inferred from the long left sleeve. The fan may have been used in the dance, although I have found no evidence in support of this. Again these objects may be rattles of which the Chinese had many kinds.

Other figures from this same mould are well known. The same type of face and headdress appear in two figures in the Metropolitan Museum and one in the British Museum,[5] but they wear heavy cloaks with the fulness gathered over the left arm giving an effect of drapery not seen in these figures which we have been considering. Mr. Hobson places the British Museum example in the 10th century and I have no doubt that it is to that same period, the end of T'ang or just after, that the figures in the University Museum belong.

III

Five Painted Pottery Figurines of Ladies Standing

Five little standing figures of ladies with hands folded under their scarfs or holding up the drapery of their long skirts are also among the objects not before published by the Museum. The material of the first and fourth is a buff clay which has been fired into a heavy stoneware and shows reddish near the base. The other three are of the white pipe clay turned buff near the surface and are

[1] Chavannes, Mission Archaeologique, Plate CLXXIII, No. 294. Clearer photo in Kokka, No. 253, June, 1911.

[2] Pelliot, Touen-huang, Vol. III, Plates 172, 175.

[3] The Museum Journal, March, 1923.

[4] Kokka, No. 253.

[5] Hobson, Guide to the Pottery and Porcelain of the Far East, British Museum, Fig. 21.

Unglazed Pottery Grave Figurines of Ladies Standing.
From Tombs of the T'ang Dynasty.

light in weight. All are unglazed but show traces of vermilion, emerald green and black unfired pigments.

The first is the short figure of a lady with double peaked headdress, the two knobbed style so familiar in these grave figurines. She wears a long robe cut with round neck and over her shoulders is thrown a scarf whose ends fall down in front over her clasped hands. There are traces of vermilion paint on the scarf, of black on the hair, and the skirt shows maroon stripes. In the Eumorfopoulos Collection there is a figure exactly like this and doubtless it comes from the same mould.[1] A third was shown in the Metropolitan Museum in the Exhibition of 1916.[2] No. 3 and No. 4 are almost alike except for material and weight. The headdress is of the high rolled type which seems to be the distinctive mark of a woman of high rank and mature years. Indeed one Chinese student has stated that these ladies with the high roll were court "chaperones" and that only the young "flappers" of the time wore their hair in the two knobs. Whether that is true or not the high roll certainly had the effect of heightening the dignity of the wearer. No. 4 wore an elaborate costume. The remains of colour show that her high girdle was painted to resemble gorgeous brocade. The skirt was vermilion, the scarf emerald green, the hair black. Eyebrows are delicately penciled in black and lids and pupils of the eyes are indicated in the same way.

The second figure is interesting for the costume which shows a style quite different from that worn by the musicians and dancers. There is a close fitting but not tight bodice with high waist line, short sleeves covering the upper arm half way to the elbow and a neck cut round and rather low. An under waist which is perfectly plain comes up to the base of the neck and has long tight fitting sleeves to the wrist. The skirt seems, like the bodice, to be of heavy material and is full and long, falling in heavy folds from the right hand which lifts it so that the hem will not catch in the rosettes on the slippers. A scarf over the right shoulder is knotted on the left hip and held up gracefully in front. There are traces of vermilion paint on sleeves, scarf and lips, and black of course on the hair. It is a matronly figure full of dignity and poise. The little lady at the end, No. 5, seems by way of contrast all the younger and more coquettish. Her dainty head is turned toward the left but her eyes glance back at you sideways in a flirtatious manner. The face is delicate

[1] Hobson, Catalogue of the Eumorfopoulos Collection, Vol. I, No. 183.

[2] Exhibition of Early Chinese Pottery and Sculpture, Metro. Mus. 1916, No. 316.

Unglazed Pottery Figurine of a Woman Mourning.
From a Tomb of the T'ang Dynasty.
Height: 6¾ inches.

and pretty and the two elegant knobs of the headdress rise up in royal fashion above the soft parted hair. Her costume is the same as that of the older woman just described but the figure is slight and girlish, in fact this young lady has affected a most astonishingly modern "debutante slouch" which is further accentuated by the scarf which she has knotted jauntily around her hips. On her left arm she carries what appears to be a large knitting bag. Probably it was for some kind of embroidery. Skill with the needle has always been one of the accomplishments of the Chinese woman and that beautiful embroideries were made in the T'ang period we know from the fragments that were discovered by Sir Aurel Stein at Tun-huang and from references in Chinese literature. The remains of pigments on this charming figure show that the skirt was a yellow ochre with dark red stripes, the scarf was an intense green, the hair black and the bodice probably maroon (now disintegrated into a faded lavender). On the face and neck are traces of a grayish pink pigment.

IV

Pottery Figurine of a Woman Mourning

In the Eumorfopoulos Collection is a duplicate of this from the same mould.[1] This is of white pipe clay, hollow, light in weight and bears traces of black and vermilion pigments. The figure sits in an attitude of grief, with left knee up and left hand resting on the heart while the head is bent in sorrow. The headdress is elaborate, a variation of the high roll, but otherwise the costume is indefinite.

V

Glazed Pottery Figurine of a Woman Playing Cymbals

The details of costume in this figure are clear. The lady is seated on a low square platform a cymbal in each hand. Her hair is in the high roll and was evidently painted black originally. The short jacket with its sleeves less than elbow length is glazed cream colour and so are the hands. The platform, scarf, and long sleeves of the under waist are in amber, while the skirt is green glazed. The material is the white pipe clay. The glaze shows a faint crackle, or rather crazing, and the surface is in most places dull, due to the beginning of decomposition.

[1] Hobson, Catalogue of the Eumorfopoulos Collection, Vol. I, No. 187.

Glazed Pottery Figurine of a Woman Playing Cymbals.
From a Tomb of the T'ang Dynasty.
Height: 7½ inches.

VI

Set of Four Painted Pottery Figurines of Men in Tartarish Costume Carrying Musical Instruments

Six figurines of men clad in Tartar costume may be found among the grave statuettes that the Museum has possessed for some years. Four of them constitute a set and belong together. They stand on square tiered pedestals and have moveable heads. Each holds a musical instrument in his hands and except for this and the variety in heads the figures are exactly alike. All are of yellow clay and are hollow from base to neck. The head, like a pointed peg, fits down into the opening of the neck. The finger prints of the potter show plainly inside the bases. The figures were covered with a white slip and then painted with black, maroon and vermilion pigments. All wear heavy coats falling from a thick roll collar to below the knees, the folds represented by grooves and a panel down the front painted more heavily than the rest. Thick trousers come well down over the ankles and the feet are clad in heavy boots. The first figure carries a drum, the second a clarionet, the third a banjo like instrument, and the fourth a Chinese mouth organ. The heads are highly amusing for the chubby round faces and perky little hats with upturned brims and round or pointed crowns remind one strangely of acorns. The cap of the clarionet player is more elaborate than the others and has traces of yellow green paint on the band in front.

We cannot assign these figures to the T'ang period. Rather do they mark the decadence of the grave potters' art and a lingering survival of the use of clay for grave paraphernalia. They were probably made in the Ming period.

VII

Two Glazed Figurines of Men in Tartarish Costume

None of the members of the orchestra just described show any signs of glaze but these other two Tartarish figures do. The one, A, wears a heavy coat which displays a rich leaf green glaze on the upper part and sleeves, and on a wide panel down the front and back of the skirt. The side panels of the coat from the belt down are unglazed and appear to have been painted maroon. The material of which this figure is made is a coarse reddish clay and very heavy,

Set of Four Painted Pottery Figurines of Men with Musical Instruments.
Probably of the Early Ming Period.
Height: Three of them, 9½ inches; fourth, 10 inches.

A

B

A. Glazed Pottery Figurine in Tartarish Costume.
Probably of the Early Ming Period.
Height, 11½ inches.

B. Glazed Figurine in Tartarish Costume.
Probably of the Early Ming Period.
Height: 9½ inches.

only the base is hollow. Originally there was a white slip. The pedestal is square and in two tiers as with the musicians but it is nearly twice as high as theirs. The head is of the same jolly round type, in this case not removable, and the hat is very high and cone like. What the figure held is a question but one could guess a drum, for there is a hole just below the belt for the support of some such instrument and the hands are pierced and held in an attitude as if grasping drum sticks. It is a crude little figure but immensely amusing.

The other, B, is of reddish buff pottery with traces of a white slip, and also stands on a tiered platform, in this case a low one. The heavy belted cloak with its wide sleeves is covered with a green glaze running to a very dark colour, almost black, in drops near the bottom, and shows a minute crackle. The tall hat of sausage shape was originally painted black or possibly had a black glaze which has distintegrated. Boots are large and clumsy. The hand at the belt is pierced with a round hole. Again the figure is crude but interesting. These also were made in the Ming period probably.

A STATUETTE OF VISHNU FROM KASHMIR

By Ananda K. Coomaraswamy

Keeper of Indian Art and Muhammadan Art in the
Boston Museum of Fine Arts

THE Museum of the University of Pennsylvania is the fortunate possessor of a very finely sculptured and well preserved statuette of Vishnu. The figure, which can be closely dated and placed, is of stone, eight and three quarter inches in height.

The deity, standing on a simple pedestal, wears a thin muslin *dhoti* and a kind of sash in which is stuck a straight handled dagger; he wears too a sacred thread of simple design, a crown with four *puris* of the usual northern type, the customary jewellery and a long flower garland (*vanamala*). The hair, in tight ringlets, emerges beneath the crown and falls on the shoulders. Of the four hands the two normal rest on the heads of a female *cauri*-bearer on the proper right and a male dwarf *cauri*-bearer on the proper left. The right upper hand is missing but almost certainly held an open lotus, the upper left holds the conch (*sankha*). Behind the head is a circular *siras-cakra* or nimbus. Beside the deity stand the two human attendants already mentioned, each with the fly whisk (*cauri*) in the right hand, and without attribute in the left. All the forms are vigorous and fleshy. The workmanship is accomplished and the general effect exceedingly elegant.

There lingers some distant reminiscence of Gandhara in the pose, but the style is completely Indianised and the modelling is by no means superficial. The nearest stylistic analogies are to be found in the art of the Gupta period on the one hand, and in the early Nepalese bronzes on the other. The figure however can be more closely dated and placed than this. The pose and realistic modelling, the shape of the dagger[1] and crown, the position of the hands on the heads of human attendants can all be exactly parallel in the Vishnu images and statuettes found at Avantipur in Kashmir, in the course of excavations at the Avantisvamin temple. This temple[2] was

[1] Apart from the group of images under discussion, I can recall no other example of an armed Vishnu.

[2] The excavations are described by D. R. Sahni, "Excavations at Avantipur," Archaeological Survey of India, Annual Report 1913–14. The finds are illustrated in the same report and in R. C. Kak's "Handbook of the Archaeological and Numismatic Sections of the Sri Pratap Singh Museum, Srinagar," Calcutta, 1923.

A Statuette of Vishnu
In the University Museum

built by Avantivarman (855–833 A. D.) "before his accession," according to the Kashmir chronicle RAJATARANGINI, and thus about 850. It is extremely probable that the Pennsylvania figure was found on the same site. The same applies to a second, rather inferior, example in the collection; this figure is almost identical with the first in iconography, but both attendants are male. A Vishnu figure in the same style, but in brass inlaid with silver and copper, from Fatehpur, Kangra, is described by Vogel, J. Ph., in Archaeological Survey of India, Annual Report 1904–5, p. 109. The inscription is "of later date than the sixth century," perhaps of the eighth or ninth. The only iconographical distinction from the figure in the Museum of the University of Pennsylvania is to be found in the representation of Prthvi, the Earth Goddess, rising from the pedestal between the feet of the deity. The only other similar images that have been found outside Kashmir come from Chamba and Lahul. In any case the figure may confidently be assigned to the middle of the ninth century.[1]

[1] In "Rupam" No. 18, 1924, misled by the evident stylistic connection of the figure with the tradition of Gupta art, and by the excellence of its workmanship, and forgetting the Avantipur finds, I assigned an earlier date, which I am glad to have an opportunity to correct.

FORM OF BEQUEST

I give and bequeath to the Trustees of the University of Pennsylvania the sum of .....dollars, in trust for the uses of the University Museum. (Here, if desired, specify in detail the purposes.)

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THE ECKLEY BRINTON COXE JUNIOR EGYPTIAN WING

ON May the eighteenth a reception was held at the Museum where a large number of invited guests inspected the collections in the halls of the Eckley Brinton Coxe Junior Memorial Wing, the latest addition to the Museum. On the following day the new wing was open to the public. Mr. Coxe, in whose memory the wing was named, was President of the Museum from 1910 to 1916. He was one of its chief benefactors during his lifetime and at his death he left a sum of half a million dollars to promote Egyptian research. Many of the objects now installed and for the first time shown were found by the expeditions maintained in Egypt under this foundation.

The rooms are adapted in their design and construction to the purpose that they serve. In colour and proportion they harmonize with the exhibits that have been installed. Moreover, the dignity and worth of these exhibits are not thrown away on the architecture of their housing, which meets them on their own level and joins with them in a common service of refinement. The ready response of the various objects, individually and collectively, to the architectural support and sympathetic setting lifts the whole exhibition to a high plane of excellence and creates an atmosphere of enjoyment.

There are twelve rooms in the wing. Of these, eight are devoted to Egypt, one to Ur of the Chaldees, one to Beisan the Palestinian City, one to Persian Art and one to Arabic Art as it occurred in Arabia, Egypt and Syria, and as adopted by the Turks in Asia Minor.

The room devoted to Ur contains collections dug up by the Joint Expedition of the University Museum and the British Museum working in lower Mesopotamia and the Beisan room contains the objects obtained by the Museum's expedition excavating at that ancient site in Palestine.

THE TABLET

The Memorial Tablet to Eckley Brinton Coxe Junior is placed on the wall of the principal lateral gallery on the main floor, where its central position indicates its purpose of uniting all of the Egyptian and related galleries comprising the wing and extending to both floors.

The tablet which is of bronze gilt is supported by two red granite lions, reproductions of two superb and singular sculptures in the Egyptian Section of the British Museum. One of these is by Thothmes III and the other by Tutankhamen, the names of these rulers being written in hieroglyphics, one on each lion. These lions are, with one exception, the only reproductions in the exhibition.

The large alabaster vase in the center bears the name of Kha-Sekhem, a king of the Second Dynasty.

THE MAIN EGYPTIAN HALL

This hall is devoted to sculpture as represented by objects not too large and heavy for the upper floor, together with several examples of mummy cases which, properly enough, come within the class of sculpture, whatever the material. Of outstanding interest in this room are several statues and portrait heads of kings and officials, representing Egyptian portraiture at its best during the earlier and some of the later periods. Bronze figures of the gods, of sacred animals and of pharaohs are among the objects in the cases.

It will be noticed that the use of glass cases is reduced as much as possible.

THE LOWER HALL OF LARGE SCULPTURES

The weight of these sculptures required the firmer foundations of the lower floor, although the height of the ceiling required that the columns and pylons be set up in divided parts instead of as complete units. The limestone columns, doorways, pylons and other architectural features to which this hall is chiefly devoted, were rescued during the excavations conducted by the Eckley Brinton Coxe Junior Expedition at Memphis. They are from the Throne room of the Palace of Merenptah and from other parts of the same extensive and complicated edifice. In an adjoining room a model to scale of this Throne room is shown.

THE MERENPTAH PYLON

Here are shown the lower parts of the limestone Pylon that stood in front of the Palace of Merenptah, excavated by the Eckley Brinton Coxe Junior Expedition. The structure formed a passage or entrance through the high wall of brick that entirely surrounded the Palace, a large and complex structure with many rooms, galleries and courts.

The statue in the foreground is that of Pharaoh Rameses III.

A DOORWAY FROM THE THRONE ROOM

The Throne room of Merenptah at Memphis had seven entrances, all of the doorways having limestone jambs and lintels. These were decorated with hieroglyphic inscriptions and a winged sun disk. The latter was done in gold leaf with parts inlaid in blue enamel. The inscriptions and border lines were all inlaid with blue enamel, the lines and figures being sunken to a depth of about half an inch and the carving filled with the blue inlay. The example shown here is one of the best preserved of these doorways.

The substance in which these sculptures were submerged for ages till the excavations of the Museum laid them bare was black Nile mud. This was saturated for several months every year with Nile water and consequently the blue inlay has lost much of its colour and the white limestone is much stained.

In the foreground of the picture are seen the lower sections of two columns that stood before the great Pylon shown in the last picture.

MODEL OF THE THRONE ROOM FROM THE PALACE OF KING MERENPTAH

The restoration of this tenth scale model was made from the ground plans and drawings obtained by the Museum's Expedition at Memphis, and from the columns, doorways and windows in the Museum's possession. This room was deep in the interior of the Palace, surrounded by courts, corridors, halls and chambers.

There are six columns in the Throne room, with lotus capitals, each decorated with thirty two cartouches in gold leaf, the hieroglyphics being painted in pale blue. The lotus petals encircle the base and a ceremonial decoration of King Merenptah before the God Ptah forms the collar in the centre, the whole being joined by four bands of hieroglyphic inscriptions, giving the names and titles of the king.

These hieroglyphics also adorn the seven doorways, the lintels displaying massive winged sun disks in gold. The dais, on which originally stood the chair of state, the two flights of steps leading to it, the ramp and a panel on the floor leading to the main doorway are covered with painted reliefs of the bound captives of the king's vanquished enemies—ten different nations and tribes in all. On the floor between the columns are painted miniature fish ponds, the whole surrounded by marsh scenes with aquatic plants and wild ducks in flight.

Directly behind the throne the wall is decorated by a large ceremonial scene of the king offering the triple golden sceptre to Ptah, the God of Memphis; above is shown the young Merenptah being purified by Amon and Horus before two groups of deities. On the west wall is a processional, the king being borne in his palanquin by slaves, accompanied by his hunting leopards and preceded by musicians and dancing girls. Higher is a double row of hieroglyphics, being the triumphal song of Merenptah after his victory over the Libyans. The roof is upheld by two gigantic beams, originally cedar of Lebanon, resting upon the rows of columns. The ceiling is painted a brilliant blue powdered with golden stars.

One of the original columns may be seen in the large hall nearby, together with doorways and windows. The decorations on the walls and on the floors are restorations according to information acquired in the excavations and after known Egyptian methods. The columns when found had all fallen and were broken in many pieces, partly by the heat of the burning ceiling when the palace was destroyed. The conjectural restorations in colour are true to the traditions of art and of royal architecture in Egypt during the nineteenth dynasty.

THE SPHINX

This red granite sphinx from Memphis was found by Petrie a few years ago in his excavation of the Temple of Ptah adjoining the Palace of Merenptah. The face has been destroyed by exposure to the weather, the drifting sand and perhaps the effect of fire. It occupies a central position in the hall of large sculptures. The features of this sphinx were those of Rameses II.

THE TOMB OF RA-KA-POU

This tomb was excavated at Sakkara in 1903 by the Egyptian Government under Mr. Quibell. It was presented to the Museum in the following year by Mr. John Wanamaker. The exhibition rooms of the Egyptian Section have not heretofore been large enough for its accommodation, wherefore it has till now been installed in the basement, where it has been accessible to visitors enquiring especially for it. Hereafter it will be accessible to all visitors. Ra-ka-pou was an official in Thebes during the Old Empire.

The statue placed in the interior is a copy of the wooden statue in the Cairo Museum knows as Sheik El Beled. It is placed in this position to indicate the appearance of the statue of Ra-ka-pou that has disappeared. The limestone walls of the tomb are covered with scenes representing the meats, game, fruit, cakes and other viands that the mourners would wish the deceased to have for his journey or that he might require.

AN OLD EMPIRE PORTRAIT

This limestone head is from a polychrome statue and was found at Sakkara, the necropolis of the ancient capital, Memphis. It is workmanship of the Fifth Dynasty and an excellent example of the art of that great period that is represented also by other portraits in the collection. The portrait shows a man, probably a prominent official and a person of importance. It is a little over life size.

HEAD OF A KING

Colossal in size, this crowned head, superbly carved from yellow quartzite is among the great pieces of the collection. The style and execution appear to be those of the Eighteenth Dynasty, to which period this masterpiece may with reasonable assurance be referred.

THE DOG

Carved in white limestone, the animal here shown measures 22 inches high. Round his neck is a collar picked out in relief and painted in red and blue. From this collar depends in front the cartouche of Thothmes III painted on the white stone in blue and red.

"The Dog, though a very favorite animal of the Egyptians, appears never to have been regarded as a god, although great respect was paid to the animal in the city of Cynopolis; on the other hand Herodotus tells us (ii.66) that in 'whatsoever house a cat dies of a natural death, all the family shave their eyebrows only; but if a dog die, they shave the whole body and head. . . . All persons bury their dogs in sacred vaults within their own city.' If any wine, or corn, or any other necessary of life happened to be in a house when a dog died its use was prohibited; and when the body had been embalmed it was buried in a tomb amid the greatest manifestations of grief by those to whom it belonged. If we accept the statement of Diodorus (i.85) that a dog was the guardian of the bodies of Osiris and Isis, and that dogs guided Isis in her search for the body of Osiris, and protected her from savage beasts, we should be obliged to admit that the dog played a part in Egyptian mythology; but there is no reason for doing so, because it is clear that Diodorus, like many modern writers, confounded the dog with the jackal. The dog, like the jackal, may have been sacred to Anubis, but the mythological and religious texts of all periods prove that it was the jackal-god who ministered to Osiris, and who acted as guide not only to him but to every other Osiris in the Underworld."—THE GODS OF THE EGYPTIANS, by Sir E. A. Wallis Budge, Vol. II, page 366.

THE CAT

This bronze figure, 20 inches high, has turned a deep green in colour except the eyes that are of gold.

"The Cat was sacred to Bast, the goddess of Bubastis, and was regarded as her incarnation; its cult is very ancient, and as a personification of the Sun-god the animal played a prominent part in Egyptian mythology. Thus in the xviith Chapter of the Book of the Dead mention is made of a Cat which took up its position by the Persea tree in Heliopolis on the night when the foes of Osiris were destroyed . . . and the vignette depicits the Cat in the act of cutting off the head of the serpent of darkness. In the cxxvth Chapter the deceased says (line 11) in the usually received text, 'I have heard the mighty word which the Ass spake unto the Cat in the House of Hapt-re,' but what that word was is not stated. The Ass and the Cat are forms of the Sun-god, and it is probable that the deceased learned from them the words which would enable him, like them, to vanquish the powers of darkness. From a stele reproduced by Signor Lanzone, we find that prayers were offered to *two* cats by the two women who dedicated it, but whether these represented two forms of the Cat-god, or two pet animals only is not clear. . . . The monuments and inscriptions contain abundant evidence that the greatest reverence was paid to the cat throughout Egypt, even as classical writers say. According to Diodorus (i.83) the Egyptians fed their cats on bread and milk and slices of Nile fish, and they called the animals to their meals by special sounds. When a cat died its master had it placed in a linen sheet and taken to the embalmers, who treated the body with spices and drugs, and then laid it in a specially prepared case. Whosoever killed a cat, wittingly or unwittingly, was condemned to die, and an instance is cited by Diodorus in which a certain Roman who had killed a cat was attacked in his house by the infuriated populace and was slain."—The Gods of the Egyptians, by Sir E. A. Wallis Budge, Vol. II, page 363.

In this passage from the Book of the Dead the Cat is seen cutting off the head of the Serpent of Darkness on the night when the foes of Osiris were destroyed. The Papyrus from which the illustration is taken is that known as the Papyrus of Hunefer and is in the British Museum. A reproduction of it is shown in this Museum.

DR. FARABEE'S LAST JOURNEY

By J. Alden Mason

FOUR centuries ago to this very year, in 1526, a handful of men stood on the deck of a tiny caravel off the coast of southern Colombia. For more than a year they had endured the arduous privations that were the lot of the sixteenth century explorer: hunger and thirst, the enervating climate and the irritating attacks of insects. Before them waited unknown dangers, starvation that had already claimed a large portion of their number, hostile natives and all the terrors of the imagination. Behind them lay relative peace and security. And yet the unknown lands ahead beckoned to the stout hearted with hints of adventure, discovery and wealth. Fourteen of the company elected to remain with Pizarro and carry on the conquest of Peru. Seldom has history recorded an instance of such steadfast adherence to purpose in the face of stupendous odds.

But such has ever been the lure of Peru. Though today no Inca army bars the way, yet many diseases, among them malaria, typhoid and dysentery, still lurk in wait for the unimmunized stranger from the north, and not infrequently they take a dear toll from him whose audacity and determination lead him to ignore or underrate them. Such was the fate of Dr. William Curtis Farabee, late Curator of the American Section of the University Museum[1]. Drawn to Peru by the wealth of its archæological material and while in active prosecution of his work, he was stricken down with fever and dysentery, from the results of which he never recovered. Possibly he might have entirely recovered his health had not his devotion to his duty and to science induced him to recommence and continue work in Peru and Chile possibly too soon. Taken ill in June, 1922, he refused to abandon his undertaking, but remained in western South America until February, 1923, alternating periods of work with periods of rest and convalescence. Returning to Philadelphia, in April, 1923 he endured more than two years of slowly sinking illness until his death in June, 1925. The present article, offering a brief account of his last expedition, is prepared mainly from his field notes, diaries and letters and illustrated by his photographs.

[1] Vide The Museum Journal, XVI, 2, June, 1925.

Peru is a land of peculiar interest and fascination to the archæologist. Here are found the remains of wonderful old civilizations which had long been forgotten and buried under the desert sands when Pizarro first set foot on the land. In some respects the Peruvian cultures may claim to have been the most highly advanced of any in America. Though absolutely without any system of writing—in which respect they fall far behind the Mexicans—they had developed a wonderful social system based on a decidedly socialistic plan. Though far inferior to the Mayas of Yucatan in the beauty of their architecture, yet their stone walls are extraordinary examples of the mason's art, and the great megalithic works such as the stupendous fortress of Sacsahuaman may be numbered among the most impressive works of man.

Especially is Peru notable, however, for the perfection of the finer and smaller products of handicraft. No other region in America bears so close a resemblance to Egypt in this respect. The coast of Peru is a very narrow strip of land, the snow covered Andes being in many places visible from the sea. These rob the prevailing winds from the east of their last drops of moisture, so that decades may intervene between rain storms on the Pacific Coast. This region is therefore a perfectly desolate sandy waste except for the narrow valleys of the frequent short rivers which descend from the snowy crests of the Andes, valleys which blossom and yield luxuriantly as the tropical sun beats upon the well irrigated fields. And in these pleasant fertile valleys, as in Egypt where almost similar conditions prevail, civilizations developed very early, and many industries were brought to an extremely high stage of development. Here also, as in Egypt, the dead were buried in cemeteries in the dry sands of the desert where they were preserved from the decay wrought elsewhere by the damp. Doubtless this form of burial was chosen by these ancient peoples with this very object of preservation in view. For, although the names of these peoples, and all the facts of their history are utterly unknown to the archæologist, yet from the contents of their cemeteries he can draw a better picture of their life and culture than he can of many another American people much better known to history. Thus, not only are the dessicated mummies excellently preserved, with their buried possessions of fine textiles, baskets, objects of wood and shell, and feather mosaics, but even the vegetal products buried with the dead for sustenance on his journey to the other world are easily identifiable today. It may well be that the

Mayas and Aztecs of Mexico did as wonderful work in perishable materials as did the Peruvians, but their more humid climate did not permit the preservation of any cloths or other objects made of organic materials, and the high quality of these is known only from the glowing reports of the earliest travellers and conquerors.

At about the time of the opening of the Christian era, three important civilizations had evolved in Peru; one in the highlands which centered at the great site of Tiahuanaco near Lake Titicaca in Bolivia, and two on the western coast, one in the north near Trujillo, and one in the south near Ica and Nazca. Those on the coast, probably the oldest, were later decidedly affected and influenced by Tiahuanaco. In much later days, not long before the Spanish Conquest, the engulfing tide of the Inca armies from the highlands overwhelmed the coastal civilizations and imposed pure Inca culture upon them.

This is the story illustrated in the cemeteries of the arid coast which reveal in their contents changes and developments such as those recorded. In the oldest graves, objects of local origin alone are found; later, Tiahuanaco types appear, and, finally, objects of the peculiar highland Inca type.

The Nazca civilization was the latest archæological discovery in Peru. It was first found in 1901, and yet only twenty years later when Dr. Farabee was in Peru for the celebration of the centennial he could write that the whole Nazca country had been rifled and its wonderful treasures scattered throughout the world by mercenary men. By the time that Dr. Farabee arrived in the Nazca valley prepared to investigate its ancient culture, that valley had all been turned over in promiscuous fashion to supply the demand for the beautiful Nazca pottery. That Dr. Farabee was able to excavate an excellent collection under these conditions is indeed remarkable.

It was doubtless while observing large collections of Nazca pottery at the Peruvian Centennial, to which Dr. Farabee went as special representative of the United States Government in 1921, that he formed the idea of excavating at Nazca, for the University Museum had, until that time, not a piece of this beautiful ware. This, then, became the primary object of his latest expedition to South America on which he started early in 1922.

Leaving New York, February 5th, he and Mrs. Farabee arrived in Lima, the capital of Peru, February 20th. Upwards of a month was spent in the neighborhood of Lima while Dr. Farabee obtained

the sanction of the Peruvian Government for his expedition. During this time Dr. Farabee utilized his leisure in excavating at Chorillos near Lima, and in studying collections in the museums. Finally, on March 25th, together with Gaston Tweddle, a seventeen year-old Peruvian boy, Dr. Farabee left Callao by a Chilean steamer, and arrived at the port of Pisco, a city of only four thousand inhabitants, some 150 miles south of Callao, the following afternoon.

On March 28th he went up the Pisco River some thirty miles to the hacienda or plantation of Monte Sierpe, where he remained until the 31st. During these few days Dr. Farabee made a careful examination of the famous Tambo Colorado which lies five miles further up the valley at an elevation of twelve hundred feet. Tambo Colorado, or Pueblo Colorado, is the best preserved ruin in all Peru, as Dr. Farabee's photographs well indicate. Of pure Inca architecture, it was built in the later days of the Inca Empire, probably about the year 1500. Though the roofs are fallen, the walls with their typical niches remain, built of stone below and adobe above. The red, yellow and white coloring which was applied to the walls may today, after a lapse of more than four centuries, still be seen at a distance of a quarter mile, Dr. Farabee reports in his notes. On both sides of the river below Tambo Colorado are many other ruins in a poorer state of preservation, the mountain sides are terraced to a considerable height, and old irrigation ditches are everywhere visible, indicating a large population. He made very detailed notes, drawings of the plan and details of construction and photographs of this impressive structure.

The week from April 1st to 7th Dr. Farabee spent in the nearby Ica valley, where he studied some important private collections and investigated the numerous ruins in the valley. He reports that they were very poorly built of sandy adobe brick, now crumbling to dust.

The next few days took him to the neighboring Nazca Valley, his principal goal. Leaving Mamacona in the Ica Valley on April 7th by automobile, a few hours' run down the valley brought him to the hacienda of Ocucaje. Thirty miles more across the high pampa and the hacienda of Huayuri was reached. For a mile and a half the road led across soft sand. Two lines of posts had been fixed in the ground and between these brush had been piled to a thickness of two feet, a very expensive undertaking. The narrow valley Dr. Farabee reports to be full of ruins, those in the valley being built

Tambo Colorado, a ruin in Pisco Valley, Peru.

Tambo Colorado, probably the best preserved Inca ruin in Peru.

of adobe, those in the mountains of stone. A run of another hour brought him to Cabildo, where, apparently, the night of April 7th was passed.

The height of the Rio Grande at that time kept the party at Cabildo all of April 8th and the morning of April 9th, and Dr. Farabee as usual utilized this time in investigating the archæology, the records of which are among his notes and photographs.

At last on April 9th the party forded the Rio Grande and reached its goal at Nazca. After a day or two of investigation and preparation, Dr. Farabee commenced his excavations, which continued in Nazca Valley from April 13th until May 20th. For thirty miles he followed the Nazca River, excavating in every site which offered any promise of result.

Of the valley Dr. Farabee reports, "There must have been a very great population here in ancient times in comparison with the population at present, two thousand or twenty five hundred. The land under cultivation was about the same or somewhat greater in ancient times. Many of the irrigation ditches are the same. The other day the river was in flood on account of rains in the mountains. Crossing the valley, I found one ditch of clear water, while all the others were muddy. After following it up, I found the origin of the ditch in a continuation under the river. Another day, looking for a drink, I found another clear stream; following up, I found an artificial cut some thirty feet deep leading from the valley a quarter of a mile into the mountains. The water is always clear and never goes dry, although the river is dry for eight months. These ditches are the work of the ancients."

During his six weeks of work in Nazca Valley many beautiful objects, mainly of pottery and textiles, were secured.

Dr. Farabee kept accurate notes of his excavations and the contents of each grave, but these details are of interest only to the professional archæologist.

The body or mummy was generally found on the floor at the base of the tomb, wrapped in cloths and surrounded by pottery vessels which probably originally contained food and drink for the sustenance of the deceased on his journey to the other world. These mortuary offerings ran quite a gamut as regards quality and quantity, being probably an index of the wealth and social standing of the deceased. Some bodies were without any accompanying objects, others possessed nothing but a few ears of corn, some a rude pot or

two, while one boasted of as many as nine exquisite pottery vessels and other mortuary objects of value.

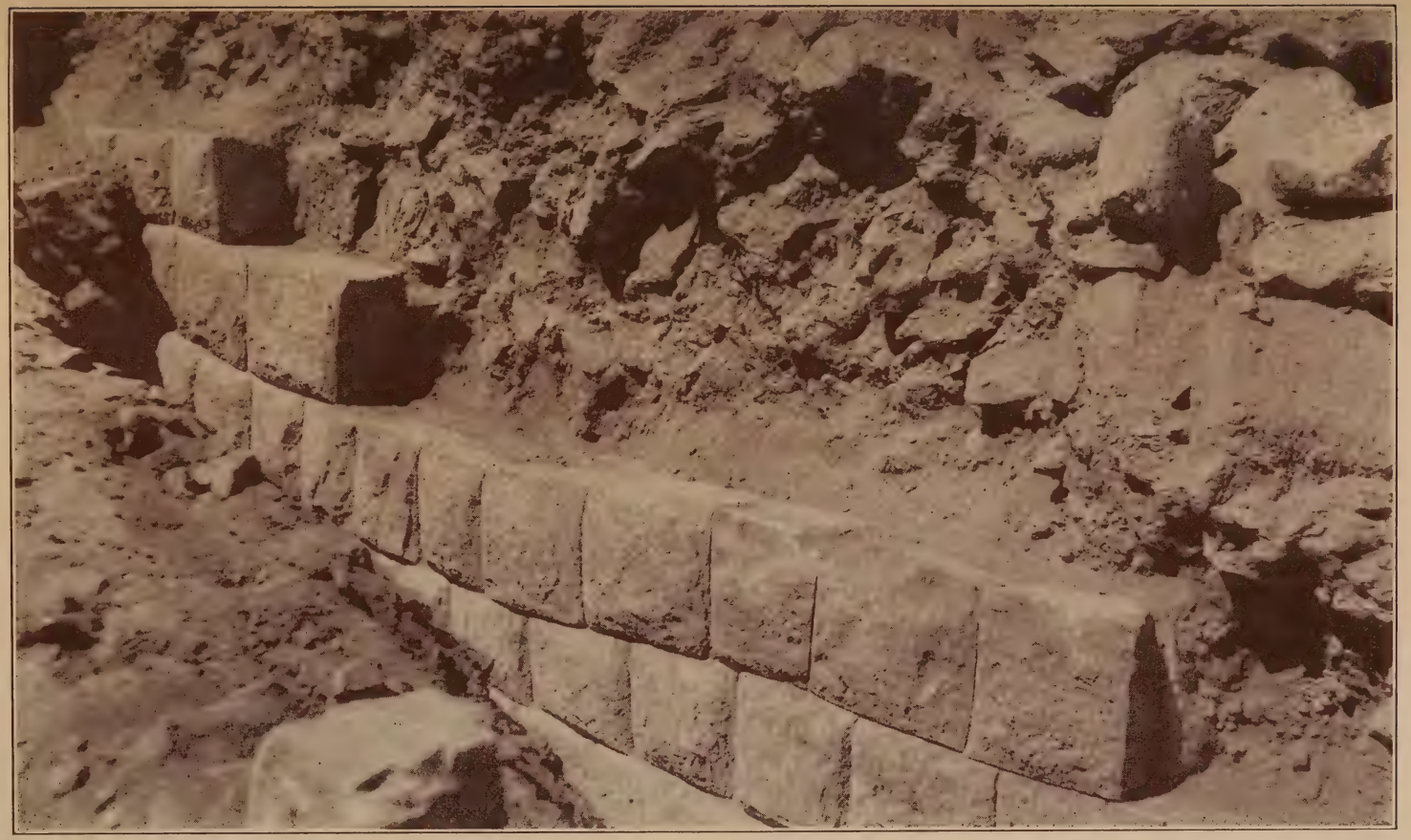
The ruins at Nazca are not extensive or of great interest, far less so than the cemeteries. The architecture of the Pacific Coast, being mainly of adobe brick, has suffered far more from the ravages of time, and consequently is far less impressive than the wonderful stone-masonry of the highlands. Dr. Farabee notes that the ruins at Nazca are found on the south side of the river, opposite the present village. They occur from the bottom of the valley to the level of the height of the citadel, 110 feet, the surrounding hillsides being terraced for house sites, not, as is more usual, for cultivation.

The main ruin at Nazca measures a thousand feet on the east and west axis and 350 feet on the north and south axis. The walls, which have been largely destroyed by earthquakes, are of adobe faced with large stones as much as ten inches in diameter and plastered over. During the earthquakes, most of these large stones have been shaken out, leaving in the walls only the small stones used to chink the interstices. The largest room measures forty feet in length, the floor having been made by levelling sand over the rock surface and covering it with adobe mud.

The principal feature of the ruins at Nazca is known as the citadel, a name which is probably appropriate, inasmuch as it appears to have been a fort. It is practically in the center of the group of ruins and occupies a rocky promontory extending out from the foothill behind. It consists of two parts, stories or tiers, the upper one being circular except at the back, thirty six feet in diameter. The walls are of adobe brick, six feet high and plastered on the interior, with niches or embrasures on the parapet. The lower section is more irregular, with an apron extending fifty feet beyond the wall of the upper section. The floors of both are of the natural bedrock without adobe. The citadel is approached by a graded way and ascended by a staircase. That this site was in later years used by the Inca conquerors is shown by the fact that a wall of dressed stone blocks, in the technique typical of the Incas, in one place encloses the stairway on both sides.

Ceasing his work at Nazca proper on April 30th, Dr. Farabee moved his scene of operations to Cantayo, a short distance up the river, where he worked until May 6th. Then he moved to Estaquerilla, the hacienda of Manuel Carrera, governor of Nazca, at a distance of seven leagues below Nazca, where he conducted investi-

Nazca Valley with the citadel in the foreground.



Inca wall of dressed stone at Nazca.

gations and excavations from May 8th to May 20th. Estaquerilla[1] is so named from a group of 240 forked posts of approximately equal height fixed in lines in the sand and presenting a strange and exotic effect in the sandy desert. The presumption is, of course, that they were employed to support the rafters and beams of an immense shed, the roof of which has long since disappeared, but it may well have served another purpose; all is conjecture.

These posts stand six feet apart in twelve rows of twenty posts each. They measure six or seven feet in height and apparently average six or eight inches in diameter. But in the center of the southern line are three massive posts the largest of which has a diameter of about two and a half feet. In addition to this main group, other posts standing singly or in groups of two or three, or lines of from five to twelve are noted all about Estaquerilla. Other lines of stumps of posts indicate that there was a stockade of about a hundred yards square about Estaquerilla. But here there is little evidence of architectural features, only a very few walls of stone or adobe being found.

Considerable excavation was done by Dr. Farabee during his stay of nearly two weeks, although the local cemeteries had been almost entirely despoiled.

At Cahuacha as well as at Estaquerilla, Dr. Farabee noted the presence of ruins; in fact, it is probable that ruins can be found almost everywhere along this coast. Those at Cahuacha, however, are not of the type to attract the attention of casual visitors. In many places the tops of the hills have been levelled, built up with adobe and made into terraces so that they stand up above the line of the hill. In other places, small mounds built of adobe bricks of a wedge shape are seen. Lines of adobe walls run for hundreds of yards, but most of these are now crumbled and disintegrated, reaching a height of two feet in only one place.

The shape of the adobe bricks employed differed greatly from place to place. At Nazca, apparently, square bricks made in moulds were typical; at Estaquerilla square bricks were entirely missing, the adobes being of a wedge shape and hand made, built into the wall in the same way as stones at Nazca. The wedge shaped adobes

[1] The proper name is not quite certain, as it is a small place not mentioned on maps or in archæological literature. Dr. Farabee writes it both as Estaqueria and Estaqueira. The root is doubtless connected with *estaca*, "stake," and *estacada*, "stockade." Estaquerilla would be the most likely spelling.

Estaquerilla, showing the arid nature of the country.

The principal great posts at Estaquerilla.

were found also at Cahuacha, but in the upper part of the valley above Cahuacha they were cylindrical, ten inches long and six to eight inches in diameter, also hand made.

At two other places in Nazca Valley Dr. Farabee made investigations: at Tambo de Perro, four miles below Estaquerilla and at Las Cañas, six miles above Estaquerilla where he notes that the adobes were hand made cylinders.

The last dated entry in Dr. Farabee's Nazca notebook is that of May 20th at Estaquerilla. However, there are several pages following, referring to Cahuacha, Tambo de Perro and Las Cañas, and his expense sheet refers to work in Nazca Valley until May 26th. From this time on, and except for detailed and dated notes of his work later at Arequipa, Pisco and with the Araucanian Indians, the details of Dr. Farabee's life must be gathered from occasional letters written by him and Mrs. Farabee. Apparently, during most of this time, he was too ill, weak and indisposed to keep a diary.

It was evidently in the Nazca valley on or about May 26th that Dr. Farabee first contracted the illness which, after a lapse of more than three years, was to claim his life, a martyr to the cause of scientific research. The complaint was inflammatory dysentery, one of the diseases most prevalent and feared in the tropics, caused, generally, by the infected drinking water which one must endure in isolated arid places. The place where he was taken ill was at a distance of 154 miles from Ica, the sole source of medical attention, a city of some ten thousand inhabitants. Though ill, apparently he rode fifty two miles on horseback the following day, May 27th, from Nazca to Cabildo. Such a trip across desert trails is an arduous task for one in the best of health, and for Dr. Farabee in his feverish condition, it must have been torture. Small wonder he collapsed in a native hut at the end of the day. From here he sent for an automobile, for which he waited three long painful days. Dr. Farabee's perseverance in his work needs no fuller encomium than is found in the mute evidence of the following item in his expense account: "June 1—Labor—Cabildo." Evidently during these three feverish days, he had kept his men at work excavating. That very day he endured an even more exhausting ride of more than a hundred miles in a small automobile over the rough trails of the Pampa Huayuri to Ica. Naturally he barely survived the journey, and the terrible hardships acting upon his constitution, which, although originally robust, had doubtless been weakened by the malaria from which he

Dr. and Mrs. Farabee in South America.

had suffered on his previous trips to Guiana and the Amazon, undoubtedly laid the foundation for the pernicious anemia which, baffling the best help which medical science could offer, eventually overcame his heroic resistance. As it was, he could not have lived two days longer without medical attention. Too ill to be taken to the best hospital at Lima, he was removed to the estate or hacienda of a local friend. A slip of paper found in one of his notebooks, apparently a nurse's record of his treatment for June 4th and 5th written in Spanish, gives a sufficient insight into the gravity of his illness, an average of above one administration for each of the twenty four hours being indicated. But he rallied under the tender ministrations of Mrs. Farabee, who joined him about that time as rapidly as poor transportation facilities permitted, and apparently was convalescent by the middle of the month. However, he was not able to travel until June 23rd and then went by way of Pisco, Callao and Lima to Chosica, a health resort at a moderate altitude in the mountains twenty miles beyond Lima, where they arrived on June 25th. He had then lost forty pounds in weight and could with difficulty walk a hundred yards.

Fifteen days of rest at Chosica not proving a high road to convalescence, Dr. Farabee went to the British-American Hospital in Callao for the week of July 12–18. From here he decided to carry out his long projected trip to Arequipa, a health resort of much higher altitude in southern Peru. They left on the 18th and reached Mollendo, the seaport, July 20th, Dr. Farabee "well, but thin and weak," as he optimistically reports.

In the beautiful healthful region of Arequipa Dr. and Mrs. Farabee remained from July 20th until August 24th, recuperating under the shadow of the majestic snowcapped volcano "El Misti," 19,200 feet high. Even in his weakened condition, his mind was constantly on his work and the objects of his expedition. In a letter of August 23rd he states that although thin and light he felt in good health and had been exploring the region for three weeks. The whole valley, he reports, was formerly occupied, and the terraces are used for house sites today. Regarding his excavations, I quote his report almost verbatim.

"Eight miles east of Arequipa is Sabandia, a summer resort; it was also the center of ancient culture. The hills all about are terraced to their tops with little houses dotted between. Burials were made on the tops of surrounding desert hills. . . ."

Arequipa and "El Misti."

Cultivated terraces near Arequipa.

In two weeks of digging, Dr. Farabee secured over one hundred pottery vessels. On account of the greater humidity of the climate, however, all perishable objects such as he found so perfectly preserved at Nazca had entirely disappeared.

Another place investigated by Dr. Farabee was at the mountain pass of Corralones on the trail from Arequipa to the sea, about seventy miles from the sea and thirty from Arequipa. It appears to be near the station Quishuarani on the railroad from Mollendo to Arequipa. This is about one third way on the old Inca road from the capital city of Cuzco to the sea and, as the river here bends so as to come within three miles of the trail, it was probably an important point in early days. The pass is two thousand feet above the river and seven thousand above the sea. Here in aboriginal days was one of the inns or tambos which the Inca rulers maintained on their road at intervals of a day's travel, a building of dressed stone of two rooms and a "corral" or wall of stone, all now in ruins.

The interesting feature of this place, however, is not the tambo but the petroglyphs. Dr. Farabee reports that the whole mountain is covered with granitic boulders of all sizes, weathered to a reddish brown color on which figures were made by pecking with another rock through the weathered patina to a depth of a quarter inch. The making of these figures had evidently continued from the earliest times up to the present. Figures of men on horseback and initials with dates contrast with figures of entirely aboriginal content. Dr. Farabee records that one date, 1652, seemed fresh in comparison with some of the obviously earliest markings. "The feathered two headed serpents appeared the oldest, along with geometrical designs, suns, deer and faces. There were no dogs and few llamas, but many deer, frogs, foxes and lizards." The photographs which he made of these petroglyphs afford a far more realistic impression of them than can any description.

On August 25th, Dr. Farabee felt sufficiently recuperated to attempt a longer trip and, taking advantage of the hospitality of Mr. T. A. Corry, accompanied him in his private car to La Paz, the capital of Bolivia. La Paz is a most picturesque city of 107,000 inhabitants, situated at an altitude of 12,120 feet in the southern Andes. A considerable part of the population is composed of Aymara Indians, and thousands of other Indians of the same group crowd the city on market and fiesta days. A few miles away on the shores of Lake Titicaca are the extraordinary ruins of Tiahuanaco,

Petroglyphs at the pass of Corralones.

A mythical animal incised on a boulder at Corralones.

Tiahuanaco, Bolivia.

the center of the early and semimythical "Megalithic Empire" which probably flourished in the early years of the Christian Era and disseminated the influence of its culture far and wide throughout western South America.

Returning to Arequipa for a few days on August 29th, Dr. Farabee proceeded again to the highlands on September 15th, this time to the romantic city of Cuzco, apparently with the purpose of making researches and excavations in this region. He remained in Cuzco until September 30th, much of the time living with Dr. A. A. Giesecke, a graduate of the University of Pennsylvania, Rector of the University of Cuzco and sometime Mayor of the city. But Dr. Farabee found himself too ill and weak to attempt any arduous labor at this altitude of 11,380 feet and had to content himself with observing the better known features of this old capital city of the Inca Empire, the city which was as sacred to the ancient Peruvians as is Mecca to Mussulmans. Here on November 15, 1533, Francisco Pizarro completed the conquest of Peru.

Cuzco today retains little of her former glory and plays but a small rôle in the interests of modern Peru. Compared with the 223,000 inhabitants of Lima, the modern capital, Cuzco's 30,000 people, many of them Quichua Indians, count for little. But this very fact of unprogressiveness has permitted the historical background to persist largely unchanged and the city to remain a Mecca for tourists, archæologists and historians. Here as nowhere else in America can the old be glimpsed in the present. The old pre-Columbian Inca masonry still shelters in its shade Indians of pure Inca blood whose costumes and customs have been changed but slightly and superficially since the days of Pizarro and Atahuallpa.

Aboriginal Peruvian masonry is interesting, admirable and in places stupendous. The walls stand today as firmly as the year they were erected, although no mortar or other cementing material was used in their construction. So nicely are the stones fitted together that the adjacent surfaces are broad, even, flat and smooth, meeting so closely that a knife blade cannot be inserted between them, and standing firmly. The stone blocks were not cut to uniform or even approximately uniform size, but were apparently selected at random, of various sizes and shapes, and their sides abraded down to fit their neighbors and the exact space to be filled. The labor required to dress such stone blocks with the use of only stone tools and sand abrasives—for iron and steel were totally unknown and bronze

Modern Cuzco, the ancient capitol of the Incas.

Street-cleaners and porters in Cuzco.

Two types of stone masonry at Cuzco.

implements not suited to the work—can hardly be imagined. Apparently the masonry of the earliest days was the most careful and marvellous, the workmanship deteriorating, as is often the case, in later days. It was this architecture which has given the name Megalithic Empire to that old culture which preceded the Inca and whose principal seat was probably at Tiahuanaco. The most impressive example of this work is found at the awesome fortress of Sacsahuaman which guards the northern approach to Cuzco, on the brow of the hill 760 feet high, overtowering the city. The total length of the walls is about eighteen hundred feet, but the central portion consists of three parallel walls twelve hundred feet long, with zigzag reentering angles built according to the modern type of fort engineering. The lower wall measures twenty seven feet in height, the middle wall eighteen and the upper wall fourteen feet, a total height of fifty nine feet. But the astounding feature of Sacsahuaman is not so much its majestic proportions as the massiveness of the individual blocks composing it. These are of an almost incredible size, the blocks at the salient angles being especially enormous.

Some of the earlier chroniclers speak of the blocks as having been brought from quarries five to fifteen leagues away. Even discounting this latter statement, it is difficult to understand how a people, ignorant of modern engineering theory and possessing only the rudest appliances without metal parts, could ever have transported and erected such immense blocks, even granted unlimited reserve of man power. The cyclopean blocks are generally not erected in regular courses, but each block is dressed so as to join closely with its neighbor.

This same style of masonry is seen in the walls of many old buildings in Cuzco today, one famous large stone block being known as the "Stone of Twelve Angles," so many modifications of its faces having been required to cause it to fit the faces of its neighboring stones. A second type of masonry is apparently later and somewhat inferior, the stones smaller, less angular and less carefully dressed. Of such masonry is built the Colcompata, another majestic structure on the outskirts of Cuzco at the base of the Sacsahuaman hill. This is believed to be the wall of a palace built by the first Inca, Manco Capac. The doors and niches so typical of Inca architecture, converging towards the top, are well illustrated in this structure.

The Indians of the highlands of Peru and Bolivia, the Quichua and Aymara, dress in very distinctive costumes, the result of a blend

The great fortress of Sacsahuaman, overlooking Cuzco.

The Colcompata, Cuzco.

of aboriginal and Spanish garb. The chilliness of the climate at this high altitude requires that sufficient clothing be worn, but the poverty of the average native necessitates that it be worn to the last thread. Since not only the cold but the scarcity of fuel and water in these bleak regions makes washing and bathing infrequent, most of the natives are unkempt and dirty, especially the old and infirm. The younger men and women, however, possess good apparel, especially for fiesta days. The men wear the woven poncho of the same type as that used in Inca days, but also trousers which reach only to the knee, and the local officials always carry as a badge of office elaborate staffs. The women wear voluminous skirts, generally a large number of them at once, but still affect the shawl, worn, as in Inca days, with the corners at the neck fastened with a large silver pin or *topo*. Always busy, they may be observed spinning yarn as they walk the streets.

Dr. Farabee remained only a few days in the neighborhood of Cuzco, returning to Arequipa on October 1st. Here also his stay was short, for, impatient of more delay and anxious to prosecute his researches further, he planned to return to Pisco, where he had seen some interesting ruins. Leaving on October 18th, he spent several days looking over the field, and on October 24th inaugurated excavations at Puntillo, near Pisco. Here he remained at work until November 18th, excavating at Puntillo, at Manrique Solar and surrounding places and making side trips to Pisco, Ica and Caucata to study collections and arrange work. As a result of these researches he was able to ship a large collection from Pisco, but his notes on his work are rather brief.

On the edge of a slight terrace close to the beach and only fifteen or twenty feet above sea level Dr. Farabee found the walls of houses completely buried in the sand. They were built of adobe, four to six feet high and five feet thick. Just behind this group of houses he found a cemetery of peculiar type, composed entirely of graves of young llamas without a single adult animal. Some thirty such burials were dug up in a small space, but with them there was nothing of interest.

Across the bay Dr. Farabee's explorations yielded little of interest for an article that does not deal with the more technical side of archæology. The same is true of the shell heaps that he found below Puntillo, along the beach, and his researches at Pisco.

Officials of a Quichua Indian town.

An ancient Quichua Indian woman.

In a letter written on November 18th, Dr. Farabee, evidently feeling considerably better and confident of speedy recovery, outlined his plans for the continuation of his expedition, an ambitious project, only a small portion of which fate was to permit him to realize. He planned to spend a few days with the little known Uros Indians of western Bolivia near Lake Titicaca, and to make extended researches on the Araucanian Indians of central Chile. Then he wished to cross the Andes and to work for some time in Argentina, both excavating and making ethnological investigations among the Patagonians, and finally to study the lowly Botocudos of eastern Brazil, the "real cannibals of Brazil," as he termed them. Of this extensive program, only the work with the Araucanian Indians was realized.

On November 19th Dr. Farabee left Pisco and on the following day visited the hospital in Lima, remaining in the city several days. Between November 28th and December 6th he evidently made a hasty trip to Mollendo and Arequipa and back, whether for health or business is not stated, remaining in Lima then until December 13th. Again on December 14th he proceeded to Mollendo and Arequipa and on the 17th, in company with Mrs. Farabee, sailed on the British steamer Ebro for Chile. This steamer he took, he wrote, in order to have the attention of a "white" physician, as he was "not entirely recovered and thirty pounds light." The Ebro stopped at Arica, Iquique, Antofagasta, and on the 21st arrived at Valparaiso, the principal seaport of Chile.

While waiting for the day scheduled for its departure from Valparaiso, the Ebro, in order to beguile the time pleasantly for its tourists, undertook a side trip to Juan Fernandez Island, a lonely islet in the Pacific, nearly five hundred miles from the Chilean coast. Dr. Farabee, feeling very ill, was glad to seize the opportunity of a sea voyage of a few days, and at dawn of the day before Christmas, 1922, they reached the island. The little isle, only thirteen miles long by four miles wide, is of a volcanic nature, precipitous and rugged, covered with a dense humid verdure. There are few trees, however, and before its discovery it was utterly uninhabited by man or by any mammal. The largest hummingbird known is found on the island of Juan Fernandez, but its principal claim to fame is as Robinson Crusoe's island. The original of Defoe's immortal work, Alexander Selkirk, a sailor, was landed on this island at his own request after a quarrel with his captain in 1704, and here he remained in solitude, monarch of all he surveyed, for four years and four

Juan Fernandez, "Robinson Crusoe's" Island.

months, until taken off by another vessel. A tablet is erected to him upon a hill with a marvellous view where he sat in lonely contemplation day after day scanning the horizon eagerly for a sail. These facts of Selkirk's exile are well attested, but the story of Robinson Crusoe which was based upon it is, of course, mainly imaginary.

One day the Farabees spent on Juan Fernandez Island, and, leaving there at midnight on Christmas Eve and spending the Yuletide (which in this region occurs in midsummer) at sea, they again reached Valparaiso on December 26th, and the following day proceeded to Santiago. They apparently spent from that time until January 8th recuperating and preparing for the next expedition, that to the Araucanian Indians in south central Chile.

The Araucanians are a vigorous, independent nation, or at any rate were so until recently, before they became debauched and debased by "civilized" conditions. In many respects they resemble our own Indians of the great plains, free, independent, warlike, vigorous and upstanding, with many noble qualities. They are fine horsemen, but, like our own western Indians, unduly given to strong drink. They bear the honor of having been probably the only American nation successfully to resist all invasion of their territories. The conquering armies of the Peruvian Incas learned this to their cost when they endeavored to extend their empire ever further south in the days before the Spanish Conquest, and the southern boundary of the Inca Empire was set at the northern limit of Araucanian territory. The Spanish conquerors succeeded but little better, and after a century of guerilla warfare the independence of the Araucanians within the Moluche district was recognized by treaty.

The Mapuche, as the Araucanians term themselves, probably immigrated into Chile from the pampas of Argentina in pre-Inca days, for they are evidently closely akin to the Tehuelche of Patagonia, although speaking a different language, one probably adopted from the earlier populations which they displaced. Like the Patagonians, they were nomadic hunters, hunting the guanaco and the rhea (the South American ostrich) with the *bolas*. The introduction of the horse gave them wider range and modified their culture considerably, and in recent years the settling of the country and the diminution of game have affected them exactly as they have the Indians of our western states. From a nomadic, hunting life, they have been compelled to adopt the agricultural method of existence and are showing considerable progress in this. All the land around

Araucanian Indians and their house, Chile.

Temuco, a town of ten thousand inhabitants in which few Araucanians live, is owned by Indians and affords them bountiful crops of wheat. As on our Indian reservations, they are not allowed to sell their lands.

Dr. and Mrs. Farabee left Santiago on January 8th for Temuco and remained until January 29th in Araucanian territory at Temuco, Puerto Saavedra and Kepi. In these three weeks, Dr. Farabee did a great amount of work with the natives. He secured for the University Museum a valuable collection illustrating their life, consisting mainly of the fine woven woolen blankets and the large heavy ornaments of beaten silver which are the principal adornment of the women. A large number of photographs were taken, illustrative of the life of the natives, especially at the fiesta of San Sebastian, one of the principal celebrations of the Araucanians, held only once each year and which the Farabees were lucky enough to observe.

A notebook full of scientific observations on the Mapuche was made by Dr. Farabee which will make an important contribution to anthropological literature. This includes vocabularies, physical measurements, folklore, terms of relationship, name derivation, and ethnological notes in material culture, religion, witchcraft and shamanism, marriage and burial customs, all of which are too technical and voluminous for even a resumé to be given here.

This was the last piece of field research done by Dr. Farabee. Returning to Santiago on January 30th, Mrs. Farabee was taken ill for several days, which delayed their departure for Buenos Aires. On February 5th they left Santiago over the Inter-Andean railroad, a road of magnificent scenery and wonderful engineering accomplishments, crossing the majestic Andes and descending to the pampas of Argentina. During this journey Dr. Farabee was quite ill. Reaching Buenos Aires, he went to the hospital for treatment and remained five days. Two weeks longer they spent in the Capital of the Argentine. Finally on March 1st they took the Pan American train for Rio de Janeiro, and passing through Montevideo, Santos and Sao Paulo, they reached the beautiful metropolis on March 7th. In Rio Dr. Farabee spent two weeks, doubtless in the same fashion as at Buenos Aires, visiting hospitals in search of medical relief and museums for study. On the 21st, accompanied by his wife, he went on board the steamer Western World and on April 3rd arrived in New York. He was still full of courage but his little remaining strength was unequal to further effort.

Dr. Farabee never regained sufficient health to resume his official duties at the University Museum. He never again saw the valuable collections which he had secured nor was he ever able to prepare for publication any of his important scientific data. For over two years, with failing strength but indomitable determination, he fought for life. His malady had developed into pernicious anæmia, and after his long illness, on June 24, 1925, he died at his home town of Washington, Pennsylvania, in the sixtieth year of his age.

R. Welle
MANGBETTU
R. Bomokandi
R. Nepoko
MAMVU
MABUDU
MEDGE
R. Aruwimi
R. Lindi
R. Congo
R. Chopo
Stanleyville
BABILI
BALESE
Irumu
R. Ituri
L. Albert
R. Nile
To Khartum
WAMBUTE
BANANDI
R. Semliki
Mbeni
EQUATOR
Amakoma
L. Albert Edward
R. Ruchuru
Ruchuru
Lake Victoria
WATEMBO
R. Lowa
Walikali
Kisenyies
WATUSI
BATU BALEGA
BATU RANGA
BASHI
Kiva
R. Ruzizi
Usumbura
BARUNDI
Ujiji
L. Tanganyika
Kisumu
From Dar-es-Salaam
SKETCH MAP OF
NORTH-EAST BELGIAN CONGO
MR. COLLINS' ROUTE
A.L.B

ALFRED COLLINS IN THE CONGO

A PHOTOGRAPHIC RECORD OF DAILY LIFE WITH INTRODUCTION AND NOTES

By H. U. Hall

THESE notes were compiled from information kindly furnished to me by Mr. Collins and from such references as I could find in the writings of other travellers. The photographs have been selected from a series of several hundred made by Mr. Collins during his journey.

The northeastern portion of the Belgian Congo is inhabited by a number of little known tribes, chiefly of the type sometimes called forest negro from the fact that their most characteristic representatives are now to be found in and on the outskirts of the great Congo forests which stretch across the continent from the neighbourhood of the chain of lakes occupying the Albertine Rift Valley, in which the Nile takes its rise—Lakes Tanganyika, Kivu, Edward, and Albert—to the Gaboon and the Cameroons, near the west coast. Mr. A. M. Collins, the well known traveller and big game hunter, lately visited this region in quest of examples of rare species of the large animals which still haunt its forests and savannahs. Mr. Collins, whose generosity has enriched the zoological collections of Philadelphia, New York and Chicago with the results of this and former expeditions to tropical as well as to arctic regions, has with no less generosity made a valuable contribution to the African section of the University Museum in the form of a collection of objects and photographs illustrating the life of these forest negroes and other tribes of the northeastern Congo. The photographs which, with Mr. Collins's kind permission, are here published for the first time, speak for themselves; the ethnographical collection is exhibited in the African room of the Museum.

The route taken by Mr. Collins is indicated by the broken line on the accompanying sketch map. The line is seen to enter the country with which we are concerned at Ujiji on the eastern shore of Lake Tanganyika and to leave it at the northern end of Lake Albert, after making two important detours westward to the middle and

lower courses respectively of the Rivers Lowa and Ituri. Besides collecting objects from tribes immediately on his route, Mr. Collins also obtained some from members of tribes remote from it who were visiting his hosts. The region west of the lakes is one concerning whose population we know not very much more than the names of some of the tribes. Stanley, Junker, Stuhlmann, Johnston, skirted it on the north and east; Johnston has summarized in his "Uganda Protectorate" and in "George Grenfell and the Congo" the general information gained by himself and others concerning the peoples, especially the pygmies, on its confines; and a Belgian official, Commandant Delhaise, has written a not very lengthy account of an important tribe of its southern border, The Warega or Balega. Mr. Collins' photographic and other illustrations of native life are on this account the more acceptable and important.

The types of negroes represented in the photographs are three: the Watusi of Ruanda, between Lakes Kivu and Edward; the forest negroes inhabiting the greater part of the region, both forest proper and savannah or parklands; and the pygmies, or dwarfish negroes of the Ituri forests, generally known as Wambuti or Bambuti. The first, especially when compared with the usually short forest type and the dimunitive pygmies, are strikingly tall and good looking people. They belong to a racial group sometimes known by the generic name of Hima, cattle raising aristocrats of various districts of British East Africa, and related to the Galla and Somali of the farther northeast. They probably represent an ancient blend of negro with a non-negroid north African and Asiatic stock. The shorter negroes, with whom they have to some extent intermingled, are agriculturists, practising a simple form of horticulture, without, that is, the use of the plough. Their principal garden products are bananas (or plantains), manioc (cassava), maize, and yams. They also consume large quantities of game. The pygmies, except in so far as they obtain cultivated vegetable produce from their neighbours in exchange for game, obtain their livelihood by the most primitive of pursuits, hunting and collecting wild fruits and roots.

The pygmies, where they have not entered into regular relations with their neighbours for the exchange of game for garden produce and implements and weapons, are notorious as pilferers of gardens. On some occasions, to stave off reprisals for their larcenies, they are said to leave gifts of game in place of the plantains or other produce that they carry off. In one place, at any rate, this quite irregular

device for placating their victims has become regularized into a form of procedure which supplies an interesting example of what is sometimes known as the silent trade, instances of which have been recorded as a means of dealing with similar situations in various parts of the world. It occurs among the Akkas (pygmies) of the Upper Welle District of the Belgian Congo. When an Akka returns from hunting, he repairs to the nearest banana plantation, taking with him some pieces of meat wrapped up in leaves. Then he climbs a tree, cuts down a bunch of bananas, descends, leaves a packet of meat skewered to the stem, and repeats the process with as many packets as he carries, or as many bunches as he and his companions can carry off. Readers of "Kenilworth" will recall how customers of Wayland Smith got their horses shod by leaving horse and coin near his mysterious smithy and taking themselves off, to return after a given time to find the horse shod and the coin gone, though they had had no sight of the smith. Whatever ancient historical reality may be represented by the various forms of the Weyland legend in northern Europe may not be as old as the instance of the Silent Trade related by Herodotus in connection with the trading of the Carthaginians on the African coast beyond the Pillars of Hercules for gold. It is an ancient and widespread device for bringing together the objects of trade without necessary contact of the principals, if such contact is for one reason or another impossible or not desired. As in the case of the pygmies, it may lead in the end to free and open trade to the mutual advantage of former enemies; all the stages from hostile pillage to friendly intercourse with silent trading as the means of transition may be seen in the history of the relations of the pygmies with their neighbours.

The primitiveness which such facts imply is borne out in all other respects by the circumstances of these people so far as they are known. Even their small stature and other infantile features of their physical constitution have led some writers to apply to investigations of pygmy life and origins tempting analogies connecting them with what might be called the childhood of man. However that may be, they present an interesting example of people organized in what is, so far as is known, the least complicated form of society in existence. They have, it is said, no language of their own, speaking only, with certain peculiarities of pronunciation, modified forms of the language of their neighbours.

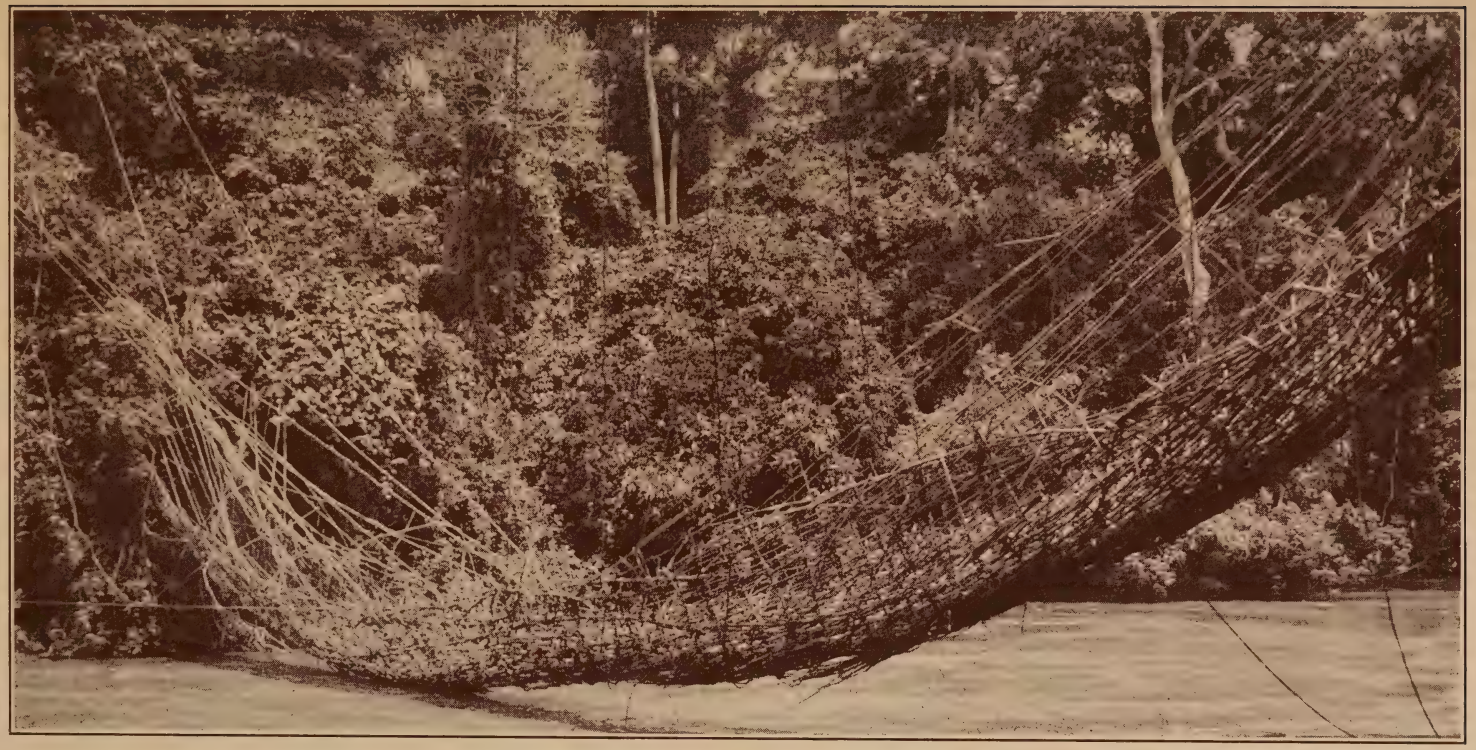
A Congo village commonly consists of a row of houses on each side of a single street. The street usually forms part of the trail through the forest, where one exists, and the trail itself is one that has been made by the habitual passage of larger game animals along a definite line of march to and from their customary feeding and drinking places.

The boundary between rectangular and dome shaped huts in this part of Africa passes in a generally north to south direction through the northeast Congo. Canes or reeds are used for covering the walls and a long coarse grass for thatching over the open wattle construction of the roof. A reed screen covers the small window. The quadrangular house is the form of dwelling which lies to the west of the boundary referred to.

The dome shaped house with a porch is the type characteristic of the eastern part of this region, near the lakes. The boats on Lake Edward are constructed by sticking together long pieces of bark. The cone shaped object made of twigs placed near the bow of the boat is a fishpot. Another characteristic possession of the people of this neighbourhood, the spool shaped portable stool, is seen beside the squatting figure near the bow of the boat.

The long dugout, made from the trunk of a single large tree, is the form of canoe used on Lake Kivu. It is hewn and hollowed by means of the iron axes and chisels that the negro blacksmiths are very clever in manufacturing. See page 199.

The suspension bridge of withes moored to trees on either bank of a stream, wherever in Africa it originated, seems to have developed principally in the valleys of the two great rivers of negro Africa, the Congo and the Niger, or the regions bordering those valleys. This bridge crosses the waters, apparently rather higher than usual, of the Ituri River.



These tall, often quite handsome negroes, are found as a kind of ruling caste among the shorter people on the eastern borders of this region. Their different groups are known by different names. These are Watusi of Ruanda, between Lake Edward and Lake Kivu. The dignified personage in front of the group is the son of a chief, the others are his household and retainers. They are in curious contrast in the matter of clothing—which is not due to modern Christian influence—to the unclad people who live so near to them. The difference in their physical appearance is probably due to an ancient admixture of non-negroid blood when their ancestors lived further north.

Perhaps the African negroes, and negroid peoples in other parts of the world, are better able through experience than anybody else to appreciate the truth of the ironic French saw about the necessary connection between suffering and beauty. At any rate, it is they who are peculiarly addicted to the practice whose results are beautifully shown in this photograph from the northern shore of Lake Edward. These results are obtained by the process known as scartattooing, or, since it is not tattooing proper, as cicatrization. A large number of incisions are made in the skin and the juice of a plant or some other irritant is rubbed into the wounds, causing them to heal up after much suppuration into prominent weals along the lines of what are often quite elaborate designs.

Face and body are both cicatrized in the case of this man from Kitunda, far to the west of Lake Kivu. In addition he has had a gap in the shape of an inverted V chipped out between his two upper middle incisor teeth. This latter mutilation, like the other, is, at least sometimes, an outward sign of entrance into the adult state.

While an elaborately sculptured dark skin has a certain beauty of its own, it is difficult to see any in the lip ornament known usually by the name given to it further east as the pelele. Babili women pierce the upper lip and insert a series of plugs increasing in diameter up to the limit of tension of the tissues of the lip. When this limit is approximately reached, the last plug employed is retained as a permanent ornament. It is not on record that Babili women are by nature especially voluble; but it would almost seem that masculine Babili guile by judicious references to the greater modishness of greater and greater lip plugs had brought about a state of things in which the last, or any, word has died on feminine Babili lips.

The natives do not commonly hunt the gorilla, but Mr. Collins employed native hunters as guides and assistants in reaching the haunts of these great apes in the forest halfway between Lake Kivu and the main stream of the Congo (Lualaba). Mr. Collins writes: "Gorillas were the chief object of my expedition. We obtained them on the Lowa River about three days southwest of Walikali. They were two or three weeks' travel west of the volcanoes where Mr. Akeley procured his for the American Museum of Natural History and were at an altitude of 3000 to 4000 feet, whereas his were above 10,000 feet."

The African pygmies adopt the mode of dress and to a less extent the ornaments and fashions of personal decoration of their neighbours. Of their own initiative they seem to have little inclination towards the adornment of their persons either by mutilation or by the attachment of trinkets or amulets. The face of this hunter is daubed with clay in a manner which suggests the ritual preparation for important undertakings which is practised by some negro tribes.

A sweet and heady beverage is made from bananas mashed and mixed with water, the mixture then being allowed to ferment. The photograph indicates a process of manufacture—or pedefacture, if one may be allowed the coinage—not unlike that followed in ancient (and contemporary) times in European and Oriental lands, where the juice of the grape was expressed by trampling, and fermented into wine. Another method has been reported for this region of Africa, according to which the bananas are sliced into rounds, placed in a pot, covered with water, and allowed to ferment for two days, at the end of which time the infusion has become a highly intoxicating brew. The scene here is a banana grove near the northwest corner of Lake Edward. Further north, among the Mangbettu, banana wine plays an important part in the ceremonies connected with the initiation of youths into adult male society. There it is drunk on these occasions by the elders from an earthenware jug the upper portion of which represents a human head. A fine specimen is to be seen in the MUSEUM among the many interesting objects in Mr. Collins's collection.

Among the forest tribes of the northeastern Belgian Congo the tobacco pipe consists of an earthenware bowl with a stem about an inch long. This is inserted into the thicker end of the midrib of a banana leaf which has previously been perforated longitudinally. Sometimes a piece of banana leaf rolled up into a small funnel takes the place of the earthenware bowl. On the march the smoker carries with him the bowl only of his pipe. The stem is renewed from occasion to occasion as a suitable halting place is reached. Smoking while actually en route would seem to be out of the question. The man is one of the Watembo (Batembo) from the country northwest of Lake Kivu.

The most primitive peoples yet discovered have all known the use of fire, though it is not quite certain that all have known how to produce it. One of the most primitive ways of doing this is illustrated here, on the westward trail from Lake Kivu. On a flattened stick held horizontally upon the ground the extremity of another stick, held vertically between the hands and rapidly twirled by a reciprocal movement of the hands, is pressed. The friction at this point of contact of the two sticks generates sufficient heat to ignite either the wood dust produced by the friction or some other form of tinder held close to this point for the glowing wood dust to fall upon.

Of the two types of bellows used in negro Africa the one illustrated here is the wider spread. It consists of two cylinders loosely covered with skin (or sometimes with banana leaves). To this covering two handles are attached, which by raising and lowering alternately the loose covering of each of the cylinders force a continuous stream of air through a tube which is placed in direct contact with the fire. With his primitive smelting furnace and forge, in both of which this kind of bellows plays its part, the negro craftsman turns out excellent work in iron.

In the South Seas the industry here illustrated is in the hands of the women. Here, between the middle course of the Semliki and the upper Ituri River, this industry, the making of the fabric which serves as loin cloths and blankets, seems to be the business of the men. One of several kinds of slender trees, of which the commonest is a species of fig, provides the bark for the manufacture of this so called bark cloth. The trees are ringed with parallel incisions passing through the bark and this is peeled off in strips. These are vigorously beaten with a club of ivory or heavy bone or horn into a sort of vegetable felt, the strips being stitched together to form pieces of the size desired. Some of this bark cloth, the bark from which it is made, and a bark beater, are among the objects presented to the MUSEUM by Mr. Collins.

The people of the great forest and its fringes though not distinguished for the lavish use of clothing have a fondness for simple ornaments of various kinds. An important industry of the men to the west of Lake Kivu consists in the making of butegas, anklets or leg ornaments which are also used as currency. A butega is a ring of split cane or bamboo wrapped with raphia fibre. Each ring passes current for one centime and a considerable number of them may be carried in the manner indicated—a great convenience to pocketless people. Girdles of butega are also worn. This leads to a higher unit of currency: once round the waist, five centimes.

The most ancient of stringed instruments is the musical bow. The most primitive, users of the bow in warfare or hunting must have been struck by the musical tone produced by the twanging of the bowstring as the arrow was discharged—"the song of the bow." In the simplest form of the musical bow the resonance of the vibrating string twanged with the finger or a short stick is enhanced by holding the string in the mouth, the cavity of which acts as a resonator. At a later stage of development a gourd is attached to the bow stave and brought into contact with the string by a loop fastened to the gourd and encircling both stave and string. From this primitive instrument develops, in eastern Africa, the monochord, in which a rigid staff replaces the elastic bow stave, while the gourd resonator remains attached in a similar manner. This photograph and the next were taken near Mbeni, a Belgian post on the Semliki River, close to the eastern edge of the great Congo Forest.

The musical bow, in Africa, is characteristic of the negro inhabitants proper. The insertion of one end of the bow stave into the gourd, or its successor, a box covered with skin, and the addition of several strings attached to pegs in the stave and to the stretched skin covering of the resonator may have given rise to the harp-guitar, an instrument known in ancient times in Egypt, and still found there as well as in Nubia, the Sudan and northern and northeastern Congo. Two interesting examples, one resembling the crudest type of instrument shown here, the other a fine example with carved ivory stem from the Mangbettu further north, may be seen in the African Room at the MUSEUM, in one of the cases devoted to the collection donated by Mr. Collins.

Among percussion instruments, besides the drum proper, the tom-tom has a wide distribution in negro Africa. The tom-tom is rather a wooden gong than a drum, being formed of a section of a tree trunk hollowed out through a long narrow longitudinal slit in its upper surface. While it is often beaten as an accompaniment to dances, the most important function of the larger kind of tom-tom is in signalling. In some parts of Africa, especially the west, elaborate messages can be sent by beating the tom-tom according to a system of varying tones and tempo, well-known within the tribe, to a distance of several miles and relayed over a territory of any extent within which the particular drum language is known. The tom-tom of this type is often the property of the chief, and by it villagers or tribesmen are summoned to assemble on important occasions. The photograph was made five days out on the road from Irumu, near the southwestern shore of Lake Albert, to Stanleyville, on the main stream of the Congo.

The placing of a shrine for offerings, similar to this, in the village street, or at the entrance to a village, as here, has been reported from various parts of the Congo. In this region, west and southwest of Lake Kivu, the erection of shrines of this kind has not hitherto been reported. From analogy with other Congo customs, known further west, and from what little is known of the beliefs with regard to spirits of the people in this eastern region, it is likely that the offerings placed in this shrine are for the benefit of the disembodied souls of recently deceased relatives of the villagers. These, at any rate for a certain period after the death of the body, are in a habitually wrathful frame of mind. If angry, hence also malevolent. For their appeasement and thus to avert the results of their ill will from the villagers, shrines to afford these homeless and disgruntled ghosts shelter and refreshment are sometimes erected.

Woodcarvings representing human beings in the northeastern Congo are, as a rule, less common, much ruder, and more highly conventionalized than such carvings are in the western basin of the great river. While, in the western Congo, these figures are either toys, examples of "art for art's sake," or receptacles or bearers of "medicine," i. e. of substances regarded as magically potent, in the northeast it seems, so far as our meagre information goes, that these figures are commonly representations of ancestors or in some other way connected with the worship or commemoration of deceased worthies. The examples here figured are said to be a "god and goddess worshipped before going elephant hunting." They were photographed at the Belgian post of Masisi (Micici) southwest of Lake Kivu.

The African pygmies, dwarfish forest people living in scattered groups in the equatorial woodlands of Africa, were known to the ancients, but have been rediscovered only within recent times. Their hemispherical huts, placed in convenient glades in the forest as temporary shelter in their wandering existence, appear to be the primitive forerunners of the dome shaped houses illustrated elsewhere in these pages and of the similar dwellings of the Kaffirs in South Africa. Driven into the deep forests by the incursions of their taller neighbours, the pygmies have achieved the respect of the latter by their skill with the bow, from which they discharge small arrows, the otherwise comparatively insignificant wounds from which are rendered deadly by the application of poisons to the arrowheads. As a consequence the pygmies are generally left unmolested by their neighbours. In some cases their skill in hunting has led to their becoming attached as dependents to the more advanced negro tribes living on the borders of the forest, who supply them with iron, vegetable food, and other supplies in return for products of the chase.

Mr. Collins is standing beside a pygmy hunter in an encampment near the Ituri River. The pygmies of this region are known to their Bantu neighbours as Bambuti or Wambuti.

MUSEUM NOTES

ACCESSIONS.

By Gift.

From Mrs. Edward Bok, the Museum has received as a gift 12 Indian baskets.

From Mr. Alfred M. Collins, 5 African ethnological specimens as an addition to his collection in the Museum.

From Mrs. Lydia Henriques, 3 archaeological specimens from Ecuador.

From Mrs. Charles Platt, Jr., 1 Chinese cloisonné vase and two Chinese Sang de bœuf vases of the Yung Chêng Period.

From Dr. Judson Daland, a woodcarving by an Ainu and a small collection of Alaskan Eskimo ethnological specimens.

From Mr. Kojiro Matsukata, a book of reproductions of Japanese prints.

From Miss Alice Brock, reproductions and models of Japanese money.

From Dr. Mary Griscom, a collection of Chinese embroideries, ornaments and utensils.

From Mr. C. T. Loo, a Chinese velvet tapestry of the Kien Lung Period.

From Mr. W. H. Church, a piece of Paiute Indian beadwork.

From Mr. F. C. Durant, a large Inca aryballus, a stone mortar and a mask shaped stone. From Mr. Durant as a loan, a Peruvian stone sacrificial bowl.

From Mr. Raymond Pitcairn as a loan, 8 pieces of Gothic and late Roman sculpture.

By Purchase.

The following additions have been made to the Egyptian collections.

A limestone dog with cartouche of Thotmes III.

A faience figure of Bes.

A limestone panel from the wall of a tomb.

A Ptolemaic silver bowl.

A black granite head of Thotmes III.

A portrait head of a Prince in black granite.

4 bronze images of gods.
A bronze cat.
A small bust in limestone (sculptor's model).
A bas relief in limestone (sculptor's model).
A bronze statuette of a seated priest.
A fresco from a tomb wall decoration.
An inscribed stone writing tablet.
A diorite figure of Osiris.
A statue of Amenhotep II.
A Coptic stone relief.

The following additions have been made to the Mediterranean Section.

2 large Greek marble loutrophores.
2 Tanagra figurines.
A red figured Greek vase.
A Greek statuette of Demeter.
Part of an Attic grave stela.
An Attic crater.
A Cypriote painted barrel shaped jar from the Cesnola Collection in the Metropolitan Museum.

The following additions have been made to the Chinese collection.

12 Chinese terracottas.
18 Chinese textiles.

The following additions have been made to the Persian collection.

A large Persian jar of the 8th Century.
A Persian textile of the 16th Century.
A Persian illuminated manuscript book. 16th Century. The Khamsa of Nizami.
A Mohammedan bronze candlestick inlaid with silver. 13th Century.
An Arabic enamelled glass bottle. 14th Century.

Miscellaneous.

A Crow Indian ethnological collection.
2 Aztec stone masks.
9 ethnological specimens from the South Seas.
18 African wooden masks and fetiches.

THE CHARLES C. HARRISON FOUNDATION.

The Museum has received a sum of one hundred thousand dollars from the children of Mr. Charles C. Harrison "to be known as THE CHARLES C. HARRISON FOUNDATION. . . . The income of this Foundation shall be used to defray the expenses of Museum Lectures, or in such other ways as the Managers of the Museum shall direct." The letter conveying the gift is signed by Mr. George L. Harrison, Jr., Mrs. Ellen Harrison McMichael, Mr. Charles C. Harrison, Jr., Mr. Harry W. Harrison, Mrs. Dorothy H. Eustis and Miss Esther H. Rowland.

THE SHARPE MEMORIAL.

By understanding with Miss Mary A. Sharpe of Wilkes Barre and Washington in association with her brother and sister, Mr. Richard Sharpe and Mrs. Henry St. George Tucker, the Museum will erect a memorial to their parents, Richard and Sally Patterson Sharpe. Miss Elizabeth Montgomery Sharpe and Miss Sally Sharpe, deceased daughters of Richard and Sally Patterson Sharpe, made provision for a memorial and the surviving children in giving effect thereto have decided upon a gallery. Details will be published later.

APPOINTMENT.

Dr. J. Alden Mason has been appointed Curator of the American Section.

EXPEDITIONS IN THE FIELD.

The fourth season's work at Beisan began on September 1, 1925, and came to a close on December 31. The season's work was chiefly remarkable for the discovery of four different temples of Ashtaroth superimposed over each other and dating from the time of Amenhotep III of the XVIII Dynasty of Egypt to that of Rameses II of the XIX Dynasty. In these temples foundation deposits and many cult objects were found as well as sculptures representing the deity in whose honour the temples were raised. The collections obtained are being exhibited for the present without division in the Museum at Jerusalem. At a suitable time they will be divided, and one half will come to the University Museum. The members of the expedition remained in Syria and Egypt during the summer and excavations will be resumed on September 1.

Mr. Alan Rowe, Director of the Palestine Expedition represented the Museum at the International Archaeological Congress held at Beyrout, Damascus and Jerusalem in April. The delegates to the Congress made a visit to Beisan and inspected the Museum's excavations there.

The Joint Expedition of the Museum of the University of Pennsylvania and the British Museum at Ur of the Chaldees worked continuously from November 1 until March 15, taking advantage of the cooler and more favourable season. A number of sculptures were found, including a statue of the goddess, Bau, an inscribed statue of Ningal and a white marble head of the same goddess with inlaid eyes of lapis lazuli. Of great importance also is a deposit of inscribed tablets; and of special significance is the temple kitchen showing details of domestic architecture and domestic arrangements of the divinity and his priesthood. As usual, the collections will first be shown in London during the summer and at the Museum of the University of Pennsylvania next winter. Mr. Woolley has returned to London and Dr. Legrain to Philadelphia. It is expected that work will be resumed again on November 1.

From Mr. Louis Shotridge in Alaska the Museum has received a number of rare specimens from the Tlinkit villages along the southeastern coast. Mr. Shotridge spent the winter in Sitka and its vicinity. As soon as the ice was clear, he started in his boat on a trip of exploration along the whole length of the coast.

PUBLIC LECTURES.

Nineteen public lectures were given on Saturday afternoons during the past winter, beginning on November 7 and ending on March 27. These lectures were attended by 14,306 persons.

Fifteen lectures were given on Sunday afternoons during the winter. Teese were attended by 5,043 persons.

EDUCATIONAL DEPARTMENT.

Thirty two lectures were given for the pupils in the Elementary Schools during the winter. These were attended by 22,328 children. In addition to these, thirty talks were

given for the Elementary Schools upon American history, illustrated by the "Chronicles of America" films. These were attended by 22,989 children.

Seven lectures were given for the High Schools, which were attended by 2,058 students.

NEW MEMBERS

The following Members have been elected:

Fellow for Life

Harry C. Trexler

Life Member

T. Morris Perot

Contributing Member

Joseph B. McCall

Annual Members

Miss Eleanor Grier Bartol
T. Dun Belfield
Bernard Berenson
Adolphe E. Borie, 3d
Mrs. Frank Bricker
William Ellis Coale
M. de la Villepillière
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Miss Augusta W. Harrison
Mrs. W. H. Heulings
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John W. Lea
Rufus King Lennig
Mrs. George H. Lorimer
Miss Anna R. Lowenburg
Harrison McMichael
Henry S. Morris
Miss Edith M. Peters
Mrs. Beverley R. Potter
Miss Martha Rea
Dr. Abner R. Renninger
W. H. Riley
Randolph P. Russell
John W. Schell
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Mrs. Charles M. Tyson
Mrs. Henry Pepper Vaux
Mrs. Mary S. Verlenden
Miss Mary Rogers Warren
Miss Rebecca H. Whelan
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G. Searing Wilson
Mrs. Joseph R. Wilson
J. M. Woodruff
Mrs. Duncan A. Worrell
Clarence S. Zantzinger
Mrs. Clarence S. Zantzinger

FORM OF BEQUEST

I give and bequeath to the Trustees of the University of Pennsylvania the sum of .....dollars, in trust for the uses of the University Museum. (Here, if desired, specify in detail the purposes.)

SPECIAL NOTICE

In order that The University Museum may give appropriate recognition to the substantial gifts which have been already received, and which will hereafter be donated or bequeathed for the development of its resources and the extension of its usefulness, the Board of Managers have adopted the following classification for contributors and members, and have resolved that the names of the donors of aggregate sums of $25,000 and upwards, in cash, securities, or property shall be inscribed upon a suitable tablet or tablets, to be properly displayed in the Museum.

There shall be five classes of Contributors designated as follows:

Benefactors,	who shall have contributed the equivalent of	$50,000
Associate Benefactors,	" " " " " "	25,000
Patrons	" " " " " "	10,000
Associate Patrons,	" " " " " "	5,000
Fellows	" " " " " "	1,000

There shall be four classes of Members designated as follows:

Life Members,	who shall contribute	$500
Contributing Members,	" " "	100 annually
Sustaining Members,	" " "	25 "
Annual Members,	" " "	10 "

Contributors and Members are entitled to the following privileges: admission to the Museum at all reasonable times; invitations to receptions given by the Board of Managers at the Museum; invitations and reserved seats for lectures; the MUSEUM JOURNAL; copies of all guides and handbooks published by the Museum and free use of the Library.

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THE
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CHINESE FRESCOES OF THE T'ANG DYNASTY IN THE MUSEUM

618–906 A. D.

By Helen E. Fernald

THE Museum has recently acquired three colossal Chinese frescoes which, we may state without exaggeration, are among the most important works of art that have ever come out of China. Artistically they are amazing in the grandeur of their conception, the power and rhythm of their line design and the glorious subdued harmony of their colouring. Historically they are priceless, as hitherto no frescoes of such proportions and majesty have been known to exist in that part of the world from which they have come. Indeed, up to within a few years ago it was thought that the great frescoes painted on the walls of temples and palaces during the T'ang dynasty and so extolled in Chinese literature had all perished long ago. Travellers reported the buildings destroyed without leaving a trace and it was generally assumed that no Chinese frescoes of an early period would ever be found. Expeditions under Von le Coq, Count Otani and Colonel Kozloff have discovered fragments of wall paintings in Turfan and other parts of Central Asia, but they could hardly be called Chinese. In an expedition of 1906 to 1909 Sir Aurel Stein visited the caves of the Thousand Buddhas at Tun Huang on the far western border of China and since then he, M. Pelliot, and others have made known to the world the wonderful frescoes there, and fragments of paintings on silk, many of which were at once recognized to be of unquestioned T'ang date. However, the presence in these paintings of Turfanese characteristics and the fact that many of them showed provincial workmanship would seem to place them outside the central traditions of Chinese art.

Chinese Fresco of the T'ang Dynasty.
From Honan Province.

The Museum had already acquired in 1925 a set of five mural paintings from the walls of a cave temple in Honan province. They were of much beauty of line and colour and occasioned considerable surprise and comment. But as these frescoes, together with similar examples that appeared in Europe and America at the same time, were usually single figures cut from the walls and thus dissociated from their companion figures and surroundings and as there was no definite data in regard to them, their chief effect, apart from the recognition of their artistic merit, was to prove that frescoes did still exist in Central China, for their style was such that the statement in regard to their provenience was accepted as probably correct. Accessories and various characteristics of technique led us to judge that they were executed in the Sung or Yüan period, somewhat later than the era in which painting was said to have reached its greatest heights. However, their existence held out a faint hope that some time, in some hidden and forgotten mountain monastery near the old seats of Chinese civilization, some fresco of an earlier period might be brought to light.

This hope has been realized in the new frescoes acquired by the Museum. And expectations have been so far exceeded that these three frescoes appear as a revelation. For they are tremendous in size and overwhelming in their majestic presence. As one enters the hall which they now seem to dominate and stands facing them he cannot repress a feeling of awe at the sight of the great Buddha rising some twenty feet above him and gazing down with the strange green light about his temples and hair.

There are three panels as they now stand framed on the wall of Charles Custis Harrison Hall, also a small section belonging to the left panel but not at present framed with it. Originally these all belonged together, forming parts of one enormous painting which must have been at least forty feet long and twenty-five feet high and may have been even larger. We will describe the three panels before explaining the composition of which they formed a main part.

The great Buddha facing us in the central panel is Sakyamuni seated on an elaborate dais with legs crossed and each foot resting on the opposite thigh, with soles of the feet turned up, a posture known as padmâsana. In his lap he holds on the palm of his left hand the wheel of the Law which he has just been turning with his right hand. The large though not massive head is set on a heavy neck and strong shoulders with great dignity and poise and the face

Fresco of the T'ang Dynasty.
Central Panel.
The Buddha Enthroned.
Height 17 feet 11 inches. Width 7 feet 9 inches.

bears a serene half dreamy expression. The three most prominent marks of beauty and holiness are all represented; the ushnisha or protruberance of the skull which formed a sort of bump of wisdom on the top of his head; the urna or spot on the forehead between the eyebrows, from which rays of light were said to have shone in times when he was inspired; and the long ear lobes which are so admired by Eastern peoples and were considered a sign of holiness. The garments are plain and consist of a long red under robe which falls over the knees and around the ankles, a brilliant emerald green scarf, which is draped from the Buddha's right shoulder, is looped up over the right arm and then sweeps down across the right knee to the throne, and on top of these a rich dark red, almost maroon, cloak lined with buff, which merely laps over the right shoulder but swathes the whole left side and arm in heavy folds which fall back over the left knee and drape themselves on the throne below. The hair is a deep purplish black with some indigo blue in it, and edging it all around the forehead is a strange green which touches up the eyebrows and mustache and beard also and lends an uncanny light to the face. Flesh tones are light tan. The Buddha's breast is bare to the waist, where a brocade belt in tan and green appears behind the bejewelled wheel of the Law.

The figure sits on a large cushion with a rich brocade pattern in blue, green and tan, and this in turn rests on a throne of which the details can hardly be made out, but the upper part of which is evidently a low octagonal platform of emerald green resting on another similar but smaller platform. Below in front of the throne are three figures, one of a child with its head shaved except for a few tufts of dark hair and the other two of young and feminine looking Bodhisattvas presenting offerings to the Buddha. The child has his back to the throne and is raising his right arm as if calling to some playmate to come. The figure next to the child, with her profile upturned towards the right, is holding up a large golden yellow platter full of pearls and precious stones, out of the midst of which rises a branch of deep red coral. The third figure leans from the right and, while looking back over her left shoulder, starts to raise, with a graceful gesture, a large blue bowl of chrysanthemums. Below this the fresco is much worn and one can make out only rows of lotus petals, tassels, and what appear to be steps, all evidently belonging to the throne, the ends of long scarfs and, directly in front, a huge lotus seed pod looking like a green bowl resting upon petals and stamens.

It will be noticed that the heads of the three small figures are provided with halos which are merely black circles.

The panel on the left is only less impressive than that of the Buddha. The figure is that of Avalokiteśvara, the Bodhisattva of Mercy, known more familiarly as Kwan Yin. The tiny figure of a Buddha in the headdress leaves no question as to this identification. This huge Bodhisattva, represented as male after the Indian tradition, is seated in European fashion and is turned three quarters toward the central Buddha. One is struck with the gorgeousness of the adornments in contrast to the plainness of the Buddha's garments, for here is a high jewelled headdress with streamers and pendants descending on either side, elaborate earrings, necklaces, bracelets. An undergarment of white is draped in many parallel folds over the knees and across the shins. Over this a robe of red appears. A scarf of blue falls from the right shoulder, is caught up over the arm and descends to the chair below. Over all, just lapping over the right shoulder but completely covering the left side, is a great deep red cloak. The flesh tones are light tan. Both forearms are raised in the act of untying the cord of a book which the Bodhisattva holds in his left hand. Beside him on his right stands a smaller figure, that of a graceful female deity holding her hands in an attitude of adoration. In the front of her elaborate headdress, which is a mass of emerald and blue feathers and precious stones, is set a large creamy oval jewel. Her emerald and tan garments sweep back in long unbroken lines and there is a halo drawn around her head. Below, at the foot of Avalokiteśvara, stands a child figure facing toward the Buddha and throwing both arms above his head with hands clasped in adoration. This figure has no halo. The fragment of fresco already mentioned belongs to this panel and should adjoin it on the left side. It bears the figure of an attendant to the deity with the creamy oval jewel, a dainty female Bodhisattva without a halo but wearing a bejewelled headdress and carrying a hare in her hands.

The scene on the right hand panel is different from these other two. It depicts an important personage in robes befitting an emperor approaching the Buddha's throne with hands held in the attitude of adoration, while accompanying him is a small delicate female figure and following behind is an official looking gentleman who bears a large golden yellow platter upon which lie three peaches. Back of this procession are the figures of two demon kings in fantastic armour.

Fresco of the T'ang Dynasty.
Left Panel.
Avalokiteśvara and Attendant Deity.
Height 14 feet 11 inches. Width 8 feet.

The upper one, with a bright green face, bears a sword; the other, with a blue face, carries over his shoulders a huge snake which rears its head between the two demon kings and opens its jaws threateningly. The garments of the imperial figure in the foreground are most magnificent. A white under robe appears at neck, wrists, and in front. Over this are emerald green robes, brocaded borders, olive brown flaps, all in many folds. The upper garment is a bright red robe with heavy embroidery around the neck. Cream coloured ribbons tied in bows on each shoulder descend to the hem of the dress. Jewelled chains are suspended from the girdle and jewelled bands are draped over the upper arm. The elaborate hat is tied on with a ribbon bow under the chin. Set conspicuously in the front of the hat is a large black oval jewel. The small female figure beside this royal one wears a beautifully bejewelled headdress, but otherwise her garments are quite plain, a simple white over blue with a bit of olive and emerald green in the borders. Her hands are covered by her sleeves. The official bearing the peaches is in blue with borders of cream and purplish brown relieved by a touch of emerald green. Both this official and the imperial looking personage have halos drawn around their heads, both have long beards and mustaches indicated by fine straight black lines drawn parallel and barely veiling the outlines of lips and chin. At the left side of the panel appears a section of a very large halo which intersects that of the imperial personage, the area of their intersection being represented opaque.

When the frescoes were removed from the walls of the monastery they were taken off in oblong sections cut like large flat tiles, the edges of which may readily be made out in the photographs. In the whole picture we recognize unmistakably a composition familiar to us through the frescoes and paintings from Tun Huang.

We have here three out of the five most important portions of a Paradise Scene. The picture appears again and again on the walls of the caves of the Thousand Buddhas, where, however, the central figure is usually Amida rather than Sakyamuni Buddha. From analogy we can visualize the whole scene, supplying the missing parts from our knowledge of what must have completed the composition.

The great figure of Sakyamuni occupied the center of the picture. Seated on his right was Avalokiteśvara. The corresponding figure on the left must have been Maitreya, as this completes the usual

Fresco of the T'ang Dynasty.
Right Panel.
Procession of Deities.
Height 12 feet 1½ inches. Width 7 feet 2¼ inches.

triad. Behind the throne, between the Buddha and each of the great seated Bodhisattvas, was a standing Bodhisattva. We can make out the arm of the one on the Buddha's left. Sometimes these positions were occupied by the monks Ananda and Kasyapa, but as the arm in this case wears bracelets the figure must be that of a Bodhisattva. Rising from the Buddha's shoulders are arcs of a circular halo behind his head, a halo which was opaque. The Avalokiteśvara had such a halo also, the lines may be seen at the shoulders. So doubtless had the Maitreya on the other side to correspond.

The panel of the Buddha and that of the Avalokiteśvara are adjoining; no part of the picture has been lost between them. On the other side, however, considerable of the fresco is missing between the Buddha and the procession of imperial looking deities. The Maitreya formerly occupied this space. The scalloped edge of his throne appears on the central panel just below the Buddha's left knee. On the panel of the procession the edge of the huge transparent halo running into a smaller opaque one at the top, of which only a small arc is visible, suggests that these notables stood directly to the right of the Maitreya. It is probable that all three of the main figures, the Buddha, Avalokiteśvara and Maitreya, had huge body halos as well as the smaller ones behind the head. Most of the Tun Huang paintings show this feature. Certainly the huge arc on the procession panel could hardly belong to any other figure than Maitreya. Moreover, behind the book that Avalokiteśvara is holding appear two lines which I believe are arcs of the intersecting body halos of the Buddha and the Avalokiteśvara.

Who is the personage depicted in royal robes adoring the Buddha? One thinks immediately of the figures of donors which appear so frequently in pictures of this kind. The faces of the "Emperor" and his official appear to be portraits. Yet there are three features present which are not consistent with this view, the presence of halos, the black oval jewel in the headdress which in some way connects this figure with that of the female deity standing beside Avalokiteśvara with a similar but cream coloured jewel in her headdress, and the significance of the peaches which the official is bringing as an offering. The hat of the "Emperor" is very like those worn by some of the Taoist deities as depicted in the album of drawings owned by F. R. Martin and long considered as copies from works by Wu Tao-tzŭ of the T'ang dynasty. These Taoistic deities wear

Fragment of Fresco of the T'ang Dynasty.
Belonging to the I eft Panel.
Bodhisattva with a Hare.
Height 5 feet 1¾ inches. Width 2 feet.

halos, whereas we know of no emperor so deified as to have acquired a halo in a Buddhist painting. The peaches are well known Taoist symbols of immortality. Incidentally the hare is another such symbol and is associated with the moon, where he is supposed to live and pound the elixir of immortality in a mortar. The figure carrying the hare corresponds in size, position in the composition, garments, headdress, and even design of earring to the small figure accompanying the "Emperor." There is certainly a connection. Do we have here some stellar or planetary deities of Taoistic origin? Indeed, it is probable that the Bodhisattva with the creamy oval jewel in her headdress is none other than T'ai Yin Hsing, Taoist Goddess of the Moon, while the figure we have called the "Emperor" represents T'ai Yang Hsing, the Taoist Sun God.

At least the two figures behind the "Emperor" and his following are familiar. They represent two of the four demon kings or lokâpalas, guardians of the four quarters of the universe. The one carrying a sword is Virūdhaka, Guardian of the South, the other, with the snake over his shoulders, is Virūpāksha, Guardian of the West and King of the Nâgas, or Snake people. Their colours should be blue and red respectively, but here we find that the artist has represented them as green and blue, probably to fit in better with his colour composition. That their colours are less fixed by convention than their other attributes is illustrated by the fact that when these guardians are represented in Japanese art the colours have been changed about completely. As for the other two guardians, Kubera of the North and Dhritarâshtra of the East, in our fresco they were doubtless in a corresponding position on the opposite side of the picture to the left of the Avalokiteśvara, belonging on a panel now missing, which matched the procession panel just discussed.

Thus we have reconstructed the scene in its main outlines. The Buddha seated cross legged on a throne in the center, turning the wheel of the Law, on one side the Bodhisattva Avalokiteśvara, on the other the Bodhisattva Maitreya, both sitting in European fashion and turned slightly toward the Buddha. Behind each great Bodhisattva a number of minor Bodhisattvas and perhaps monks and beyond them the demon kings two on each side. Near the front, advancing from both sides, Taoistic deities tendering adoration. In the immediate foreground children and young girl Bodhisattvas making offerings.

All this is closely akin, not only in conception but in many details, to some of the frescoes of Tun Huang. There is the same scheme of arrangement, the same position of the great Bodhisattvas—sitting in European style. There are the large halos around the three main figures, besides the small halos behind their heads, only in the Tun Huang paintings the large halos as well as the small are opaque and frequently ornamented with rather barbaric marbled designs. Minor deities approaching in procession from the right occur in many of the Tun Huang paintings and are sometimes accompanied by smaller attendants on each side. Children appear at the foot of the throne in several of the paintings and Bodhisattvas hold up jewelled caskets, vases, and plates of precious stones as offerings. Almost every paradise scene has in it one or two Bodhisattvas who stand or sit with their profiles turned to us as they make their offerings, and some of these figures bear striking resemblance to the one in our fresco, both in drawing and in physiognomy.

Such similarities as these force us to acknowledge that the paintings of Tun Huang were composed according to a generally accepted arrangement for such subjects and that the painters in many respects followed the central school of painting closely. But that the fresco in the University Museum belonged to that very fountain head of painting which was the inspiration of the provincial schools, we cannot doubt when we note the differences. For this fresco far excels in majesty and artistic worth. In most of the Tun Huang frescoes the darks and lights are spotty, many details, such as the halos, are barbaric in design, the composition has no rhythm or life as a whole, although parts do; whereas here the contrasts do not startle or confuse but make a harmonious composition of darks and lights, the spacing is characterized by that feeling for grandeur which is one of the greatest elements in the best Chinese art, and the line design as a whole as well as in details is most wonderfully unified and rhythmical, everything in the composition rising to a peak in the great dominating figure of the Buddha. There is a more ample spaciousness here, a finer sense of grouping and subordination, better taste in details. Whether there existed in this fresco as in most of the Tun Huang Paradise scenes the dancers and musicians performing in the foreground we cannot tell. We would conclude not, however, both because the design does not seem to require it and because the condition of the frescoes at the bottom of the panels suggests that they came near the foot of the wall where rubbish was

perhaps piled against them and dampness destroyed the surface. Whether there were canopies, landscapes and other details above is also uncertain.

The technique is not that of true fresco. The walls were plastered with mud mixed with much chopped straw and over this a smoother but still rather gritty coat of reddish brown clay was spread. The painting was executed upon the dry wall with body color, the thickness and opaqueness of which suggest tempera. The style is characterized by heavy outlining in black, the lines being sure, strong, unbroken, and of even width. Here they sweep in long rhythmic curves, there in snake like coils. The flesh tones of the female deities are painted white in contrast to the creamy tan colour of the masculine figures. Another convention is the use of cloud scrolls to fill up the background. There is no trace of gold on the paintings or any use of moulded stucco such as one finds occasionally outlining jewels or other details in the frescoes of Tun Huang and those of later periods. It is the simplest, most straightforward kind of painting, depending purely upon its artistic qualities and deep sincerity for its appeal.

The colour design is magnificent and deserves a few words to itself. Yet the colours used are few and not unusual. Red and green predominate but are of such degrees of saturation, used in such varying quantities and so skillfully arranged in spaces of different shapes and separated by tans or blues, that the result is one of subdued, if rich, harmony. There are two reds, the one a very dark one almost maroon such as the upper garments of the main figures are painted, the other likewise deep and rich but with a certain smouldering crimson in it. The green most used is an opaque emerald green which, placed by itself, shines out brilliantly, but next to smaller quantities of a blue of equal saturation produces a delightful peacock effect. The green used about the faces of the Buddha and Bodhisattva is intense and weird but there is very little of it. There is also but a small quantity of an olive green which appears here and there in the draperies. Throne, headdresses, jewels and brocaded borders are in emerald green combined with the corresponding blue. Flesh tones and much of the drapery are a creamy tan. The warm tone of the wall upon which the fresco was painted has done much to give these colours something in common, the tan of the background being a strong unifying factor. Indeed, the colours shine out from it like medieval jewels in a dull golden setting.

Another unifying factor has been the use of the black outlines which separate the colours like the leads of a stained glass window and themselves tend always to flow toward the great central figure, rising to a climax in the deep blue blacks of his hair.

In regard to the place from which these frescoes came and the date of their execution we have some evidence. From their character and style, comparing them with the dated work of Tun Huang, we should say without hesitation that they belong to the same general period, that is, to the T'ang dynasty, and that they came from a district where the influences were purely Chinese, probably somewhere in Central China. Striking similarities in detail actually exist between these frescoes and some of the T'ang pottery, especially the mortuary figures in the Museum. Painted borders representing brocade are very much alike in their design, and in both figures and frescoes these borders display an almost exclusive use of the two colors, blue and emerald green, with the outlining in black. The phoenix birds represented in the headdress and on the neck embroidery of the Moon Goddess are of exactly the same type as those forming the headdress of two grave figures of lokâpalas. Another correspondence may be seen between the designs on the throne of the Buddha and the borders engraved upon a T'ang stone pedestal and on one of the slabs of a horse of T'ang T'ai Tsung.

Another strong argument in favor of attributing the frescoes to the T'ang dynasty is the masculine character of the Avalokiteśvara. By the Sung dynasty this Bodhisattva had assumed a more feminine aspect and there was no trace of mustache or goatee as appears here. Finally, the very deep religious feeling so apparent in this picture is characteristic of T'ang rather than later times. Later works did not have this grandeur and power, this mysticism about them.

The types of Buddha and Avalokiteśvara are those said to have been established by Wu Tao-tzŭ, the greatest painter in Chinese history if we can believe Chinese traditions about him and his work. He was born about 700 A. D. He is said to have painted over three hundred frescoes in the region around Loyang, near the present Honan Fu, and the capital Ch'ang-an, present Si-an Fu, but apparently not a trace of these frescoes now remains. His influence was enormous. His name has been a household word in China and in all circles where Chinese art is known. The great triptych of Buddha, Manjuśrî and Samantabhadra, painted on silk, in Tofukuji Temple, Japan, is thought to be an original by his hand. Our fresco has not

the tremendous power and energy of line seen in the triptych of Tofukuji but it is certainly a work made under the influence of the same great master. The rosette system of line design centering in the position of the hands of the Buddha recalls that of the Manjuśrî panel just mentioned. The procession of Taoistic deities, also, has close affinities with some of the drawings in the so called Wu Tao-tzŭ album owned by F. R. Martin. The manner of drawing the mustache and beard in fine parallel lines is traditionally T'ang. The robes of the Avalokiteśvara are like those in the descriptions of some works by Wu, "like coiled copper wire." The cloud forms such as fill the background occur in other T'ang paintings, few as they are, for instance, the Hokké Mandala in the Boston Museum. In fact, we cannot but reach the conclusion that this fresco was painted in the latter part of the T'ang dynasty when mystical Buddhism was still strong and when Wu Tao-tzŭ's style of painting predominated. This would be either just before the suppression of Buddhism in 845 A. D. or more likely just after its revival some thirty years later.

There are several short Chinese inscriptions on the lower part of the painting—another indication that not more than two or three feet of fresco are missing at the bottom, for these characters are mostly names written carelessly by pilgrims to the temple. One inscription somewhat longer and more carefully written than the others occurs on the light space under the right sleeve of the "Emperor." It is a prayer and may be translated thus, "Exalted public official Tan desires wind and rain in proper quantities and at proper times upon his land." This is interesting but not especially enlightening.

According to information that we already have regarding these frescoes they come from a mountain monastery of Honan province which tradition says was built in the T'ang dynasty. The district from which they are said to come is not so far from Loyang and the region where Wu Tao-tzŭ did much of his work that it would have escaped coming under the influence of that tremendous personality. Thus the data already at hand tends to confirm our judgment concerning these frescoes.

THE PILGRIM OF THE MOON AT UR OF THE CHALDEES

Concerning the Fourth Campaign of the Joint Expedition of the Museum of the University of Pennsylvania and the British Museum.

By Leon Legrain

I

THE pilgrim on an archaeological quest, on his journey to Ur observes that the signs on the face of heaven are changing fast as he approaches the Libyan coast and the gates of the East. There are strange feverish sunsets, full of mirages and dreams. We are approaching an old world full of ancient history and dead bones. The long eyelids are lowered over eastern eyes as if they are tired of the sun and dust and the horror of a cruel past and a fevered present.

Alexandria and Port Said are filled with rumours of war in Syria. Under the shoulder of Mount Carmel, French transports are anchored in Haifa Bay. Is this a new Bonaparte expedition, or the last of the crusaders rescuing the Knights Templars in Acre, besieged by all the forces of Islam? Heavy barges manned by hardy Syrian rowers accost our ship. They use the long oar, standing and pulling with the whole weight of their bodies. Half Moslem, half Christian, the Syrians are a warlike race. But the Druses among them are pagans, worshippers of the moon, the sun, and the stars, survivors of the ancient religions of Canaan and Chaldea. They have blocked the desert road to Bagdad, stopped the automobile transport, killed a chauffeur and plundered the royal Persian treasury sent for security to Beyrouth. One convoy, accompanied by armoured cars and camel corps, could not break their line and had to turn back. The automobiles of the Nairn Company avoid Damascus and follow the southern road over Haifa, Amman and the difficult high ground of Moab sown with basalt rocks. But a convoy of the Eastern Transport will leave for Bagdad Sunday, November 1st, by the northern road, Tripoli, Homs, Palmyra, Kebeisa and the Euphrates, following the line of the wells. Things look quiet enough. A photograph for sale in a bookshop of Bey-

On the line from Baghdad to Basra.
Photo by A. J. Whitburn, Architect of the Expedition 1925–26.

routh shows a line of Druse brigands executed and exposed as a salutary example on a public place of Damascus. Order is restored at present at the expense of the old respect and influence. We leave in a seven passenger Packard. There is a British Major of the guard with his two Arab sloughis, a professor of Chicago University with his wife making a study of the legal status in the lands of mandate, one Scotch captain back from leave and bound for Mosul, a Swedish commercial traveller, athletic and polyglot, and one archaeologist on his journey to Ur. The drivers are all Italians.

The road to Tripoli along the shore is like another piece of the corniche. The sea does not divide but unites all the coastal lands round the Mediterranean. The same olive trees, vines, grey limestone rocks and red soil. Desert and Arab land begins after Homs and the range of the Lebanon. "The Flower of Homs," the small local hotel, supplies an honest lunch of mutton, rice, tea and native bread. The atmosphere in the bazaar is not friendly. Not a salaam, not a word of welcome. We are glad to leave the conical mud houses of the last village and to escape into the desert.

Palmyra sits in the middle of a semicircle of hills opening toward the East and the desert. The palm trees are still growing in the outskirts, drinking the water of the old spring. They gave their name to the city. Gates, towers, colonnades, temples, splendid ruins of the glorious city of Zenobia, are built of a honey coloured limestone, marvellously clear and warm and polished by the desert sand. The Arab village crowds its mud and stone houses behind the strong walls of the Sun temple. A line of barbed wire surrounds the French fortress. A new modern hotel is building with hot and cold water, bathrooms and French windows. The bathtubs are waiting on the sand outside the hotel. The cold water tap alone yields a scanty supply of liquid. The windows keep no light, heat or cold out of the room.

The desert track to Kebeisa follows the lines of the wells. We pass nomad shepherds and their flocks. Wadi Shobah, turned green after the early rains, is a pasture for camels. A frontier post half way marks the line between Syria and Iraq. An industrious official has even swept the track clear of big stones along several miles. We meet the Bagdad convoy going west, every one asking anxiously the same question, "Is the Lebanon pass safe?"

The khan at Kebeisa affords a welcome rest and protection for the night. It is built like a fortress, one big gate in a continuous

The mighty ziggurat of Ur, rising above the ruined city and the desert. The figure is that of Dr. Legrain.
Photo by A. J. Whitburn, architect of the Expedition, 1925–26.

wall. All glory and comfort are inside. From the top of the terraced roof we enjoy the evening breeze as we look down on the neighbouring town. Arab boys and girls rush, dancing and begging for pennies. When refused, they taunt us and call names, "Druses, Druses." So they know, the whole desert knows of the Syrian revolt, the bad news travelling fast and boding good to none.

We reach the Euphrates at Hit. The bitumen furnaces are still smoking and boiling the black pitch as used in the days of Noah or at the building of the tower of Babel. Palm trees line the banks of the river and are a pure delight for eyes sorely tired by sand and desert.

At Ramadi one rupee will buy a good lunch of rice and eggs and fried egg plant, with tea or Arab coffee. The Feludja pontoon bridge left behind, the smooth even plain is open toward Bagdad, a splendid racing field which has been a most bloody battlefield for Greek, Roman, Persian and Arab armies, till we reach the high mud banks of ancient canals, the distant brick tower of Aqarquf, the golden domes of the Khadhimin mosque, the Zobeid elevated tomb, the new railway station and the fresh palm tree gardens on the Tigris. We are in Bagdad.

A prosaic comfortable train travelling at low speed the whole night brings you the next day at 8 P. M. to Ur Junction, where you may change for Nasiriyeh, the small city on the Euphrates. Ur and the expedition camp lie half an hour's walk south of the station. The fourth campaign of the Joint Expedition has opened a week ago. Whitburn, the architect, and Mallowan, the new assistant, come to shake hands at the station. Yahyah, the official photographer, and Atshan, the sergeant of the camp, guide our steps in the pitch dark night. Woolley and Hamudi come to meet us in the most proper oriental shade of courtesy. We meet and our party is complete.

II

A mass of clay tablets, clay cones, diorite foundation tablets, copper figures representing basket carriers, a white stone girlish head with inlaid eyes of lapislazuli, royal documents, a cone of Libit Ishtar, a diorite tablet of King Dungi have already been recovered. There is no time to spare. Over two hundred men are working, goaded to activity by the taunts and barking voice and restless eyes of Hamudi, the foreman of the gangs.

Searching for the palace of King Dungi, we found among other things a shrine built by him to the Moon Goddess, with a statue of himself placed in it as a memorial. Time and wars have destroyed the upper part of the temple down to the foundations. But in the thickness of the foundation walls, four foundation deposits are still intact. They are contained in brick boxes lined inside with bitumen. The king or the high priest deposited in them at the time of the building over four thousand years ago a little copper statue, a diorite tablet, and some food and drink offerings, with prayers, incense burning and the clanging of musical instruments. The copper statue represents a basket carrier, a corb full of earth on his head. On his body, as on the stone tablet, the same inscription gives the name of the god, of his temple, of the royal builder, building for a long distant posterity.

The statue of the king mentioned at the beginning of the last paragraph is the only statue of King Dungi known. He is represented standing in front of his god, with hands clasped as becomes a servant. The head is broken off. An inscription engraved on the back devotes the statue to the Moon God for the life of the king.

But the great find of the year was still to come. From a part of the broken ground where tombs had replaced the elusive Dungi's palace, the dig was extended over Dungi's shrine towards the Ziggurat. Out of the soil below three feet of rubbish in what looked like an empty piece of ground, came to light the most complete Sumerian temple of 2400 B. C., with walls, courts, shrines, storerooms, kitchen, wells, altars, statues, stelae, and over thirty door sockets found at every gate, all bearing the same inscription. From these we learn that we have found a temple built by the great Ur-Nammu, King of Ur, and his grandson, Bur-Sin. This was the private house of the Moon Goddess, Ningal, the Mother of the City. It is complete and so rich in details that we can follow the daily ritual with a vivid sense of life. It should be understood once for all that the great Moon God Temple at Ur was a walled sacred city within the larger city, like the temple of Jerusalem or the great Mosque at Mecca. Past the gates and within the sacred area there were many houses closed in by their own walls, like so many colleges of a university. One was the house of the Moon God, the Hall of Justice, where his statue, throned at the end of the double room on a brick terrace, was raised above the level of the court; another one was the great treasure house, discovered during the first campaign. The

Visitors watching the opening of a tomb closed 2000 B. C. in the temple of the Moon at Ur.

The temple of the Moon Goddess discovered this year at Ur. Looking from the shrine in the holy of holies toward the court and the brick altars still standing in the original location since 2000 B. C.

great brick tower of the Ziggurat in the northwest corner of the area formed an inner ward within its own wall and resting on its own terrace.

This year's campaign has established the fact that the Moon Goddess possessed a house, shrine, and palace of her own, grouped with the Hall of Justice of her husband and other important buildings within the great enclosure. It is likely that this house was at the same time the palace of the high priestess, who embodied and played the part of the wife of the Moon God. As the high priestess was generally a daughter of the earthly king of Ur, there was no danger of misalliance.

The house of the Moon Goddess is built on a rectangular plan with strongly fortified gates northwest and southeast of it. A double wall with a passage between for keeping guard surrounds it. A terraced roof covered walls and passage. Staircases within the passage gave access to the roof. The walls were panelled on the outside, probably whitewashed, and crenellated.

Within the area enclosed by the gates and guard rooms, the various shrines, stores and apartments were grouped round three main open air courts. The northern and southern courts were sacred and witnessed the daily ritual of sacrifices in front of the shrines. The southern court is the most perfect sacred place of that early period about three centuries before Abraham. The bronze gates which gave access to the court are gone. The door sockets or hinge stones on which they used to swing are still in position in their boxes right and left below the pavement. They are round boulders of diorite, each with a clear inscription chiselled in the surface, "King Ur-Nammu and King Bur-Sin, kings of Ur, kings of the four corners of the world." The old sounding title comes out of the ground like the voice of the past. Green oxide has been left by the copper shoe of the door post swinging in the hollow cup at the top of the stone. Clay tablets have been found telling of the pots of oil issued once a month for the greasing of the hinges of these temple doors.

The shrine proper where stood the statue of the goddess was a double room on the side of the court opposite the entrance. Two brick altars three or four feet high were erected in the court on the line of the gates. On them was piled the scented wood of morning and evening sacrifice. On them were burnt the bodies of the yearling lambs and kids. A brick tank was built in the right angle of the

The shrine of the Moon Goddess discovered this year at Ur. The daïs on which stood the enthroned statue, in the holy of holies.

court, lined inside with bitumen, affording the water supply for libation and pavement washing. A narrow path in the pavement led from the first altar to the second in front of the shrine. The threshold is the traditional sacred place. Here were the victims exposed, at least the noble portion reserved to the god was solemnly laid on a pile of cake, while incense was thrown on a little charcoal burner and the smoke like a prayer rose to heaven.

Libation, the pouring of water in the presence of the god, on green palms and bunches of dates tucked inside a large alabaster vase, was a most common form of sacrifice. It was most important to remind the gods by this daily ritual that what their people, the black headed Sumerians, needed was chiefly water in that thirsty land.

A brick recessed gate led to the double room of the shrine. On either side of the entrance brick bases still in position were the supports of memorial stelae, votive statues broken and removed long ago. A narrow gutter cut in the middle of the threshold between the two jambs is unexplained unless it were intended for the pouring and washing away of the sacrificial blood.

III

The only complete statue found this year was discovered inside the first room of the shrine, lying on the pavement close to the brick base on which it had stood. It is the statue of Mother Goose, the goddess Bau, a squat little person with a large back and a short neck, sitting on the waves of the Euphrates instead of a throne, flanked on either side by two geese, while her feet rest on two ducks. She is a well known character, the wife of the god Ningirsu living forty miles north of Ur, in a place named Lagash. The temple of the Moon Goddess had side chapels and pedestals for foreign gods and goddesses.

The inner room is the real shrine where the statue of Ningal stood centuries ago. A brick altar still stands against the wall at the end of this room, well covered with bitumen. A small staircase on the left brought the priest on to the dais on a level with the enthroned statue. The whole was probably covered with precious wood and metal panels which have disappeared. The roof was likely formed of palm tree trunks or perhaps imported cedar trees, laid across and covered with reed matting to support a mud terrace. Bitumen was used freely to prevent rain infiltrations.

The kitchen of the Moon Goddess. The fire range, the tank, the well, the copper ring to hang the rope and the bucket. About 2100 B. C.

The sacred vessels presented to the temple by generations of princes and kings were kept in small side rooms right and left of the shrine. The list of these vessels, which were of precious metals, gold, silver or even copper, has disappeared long ago. But the stone vessels, broken and scattered, remain among the ruins. One by one all the fragments of diorite, porphyry, alabaster, aragonite or oolite are collected, washed and joined so as to restore the lines of a large dish, a bowl, a cup or a vase. Such objects generally bear inscriptions carefully engraved by Sumerian scribes as votive offerings of kings to Ningal, the great Mother of Ur.

Another room close by must have been a treasury. Mixed with clay and débris, many sealings have been recovered bearing the seal impressions of high officials of the temple, the high priest, the libator, the anointer of the deep abyss of the Moon God, the diviner, a judge and several scribes. A lovely stone casket originally decorated with a gold band was used perhaps to store the jewels of the goddess or important seals.

Accounts inscribed on tablets found with the sealings open new perspectives under our eyes. We hear of a sea expedition bringing from the island of Dilmun after a three years' voyage a cargo of gold, silver, lapislazuli, precious stones, ivory, caskets of rare wood for the temple of Ningal. Another tablet fixes the days of the month when the king has to perform the sacrifice in the temple, or to pour the libation at night in a palm garden for Ninni-Ishtar, the evening star, daughter of the Moon.

IV

But one of the most unexpected and interesting features of this fine temple is the discovery of a great kitchen adjoining the shrine, which irresistibly recalls a familiar scene of the Old Testament.

"Now the sons of Eli were sons of Belial; they knew not the Lord. And the priest's custom with the people was that, when any man offered sacrifice, the priest's servant came, while the flesh was in seething, with a flesh hook of three teeth in his hand. And he struck it into the pan, or kettle, or caldron, or pot; all that the flesh hook brought up the priest took for himself. So they did in Shiloh unto all the Israelites. Also before they burnt the fat, the priest's servant came and said to the man that sacrificed, Give flesh to roast for the priest; for he will not have sodden flesh from thee, but raw."

The oldest relief discovered this year at Ur. The king as a priest performing the ritual libation in front of the Moon God. He is entirely naked, as is the priest below who performs in front of the shrine. Before

So they did also in the Moon Goddess's kitchen. Here is an ideal kitchen for boiling and roasting, with two brick fire ranges. One is in the open air court of the kitchen for roasting; the second, of more intricate construction in a covered part of the kitchen, was a circular range of massive brick construction under a perforated platform, to which a small staircase gave access. Standing on that platform the priest's servant might tend the sacrifices and he might strike a three pronged fork into pan or kettle, or caldron, or pot.

A well is sunk in the middle of the kitchen court. A copper ring fast in the pavement served to attach the end of the well rope. A brick tank lined with bitumen contained a ready supply of water. The hand millstones are still on the brick floor, and three earthen jars lean against the wall. A low brick structure might serve as a butcher's table to chop meat.

The high priestess was the head of the whole house. She personified the Moon Goddess and received the visitation of the Moon God and was his interpreter in signs and dreams and oracles. Herodotus has left a well known account of the priestess of Marduk in Babylon spending the night in the lonely shrine at the top of the tower and receiving the inspiration of the god. In that shrine there was no statue, only a gold bed and a gold table.

In Ur the high priestess was generally a daughter or sister of the king. The fact is established for Belshalti Nannar, the sister of Belshazzar, and daughter of Nabonidus, the last king of Babylon. When Nabonidus appointed his daughter to be high priestess at Ur he gave her excellent advice on the best way of discharging her duties. He recalled that the institution was not new. He was restoring an old custom. Sixteen hundred years before his time the sister of king Rim Sin of Larsa was in the same manner high priestess of Ur. Two monuments recovered this year in the court of the house of Ningal confirm this tradition and prove that its origin is lost in the past. One is a disk of travertine in the shape of the full moon, with a bas relief on one side and an inscription on the other. The inscription gives the name of a daughter of Sargon, king of Kish, high priestess at Ur and wife of the Moon God. The relief represents the high priestess herself assisting in the ritual libation. The priest, a Sumerian, all shaven and shorn, performs the rite, holding with both hands a slender vase with a spout from which the water flows into one of those hour glass shaped vases of travertine planted in front of a stepped pyramid. More priests

Mr. C. L. Woolley addressing a party of excursionists from Basra and the Persian Gulf who had just arrived by train to visit the excavations at Ur.

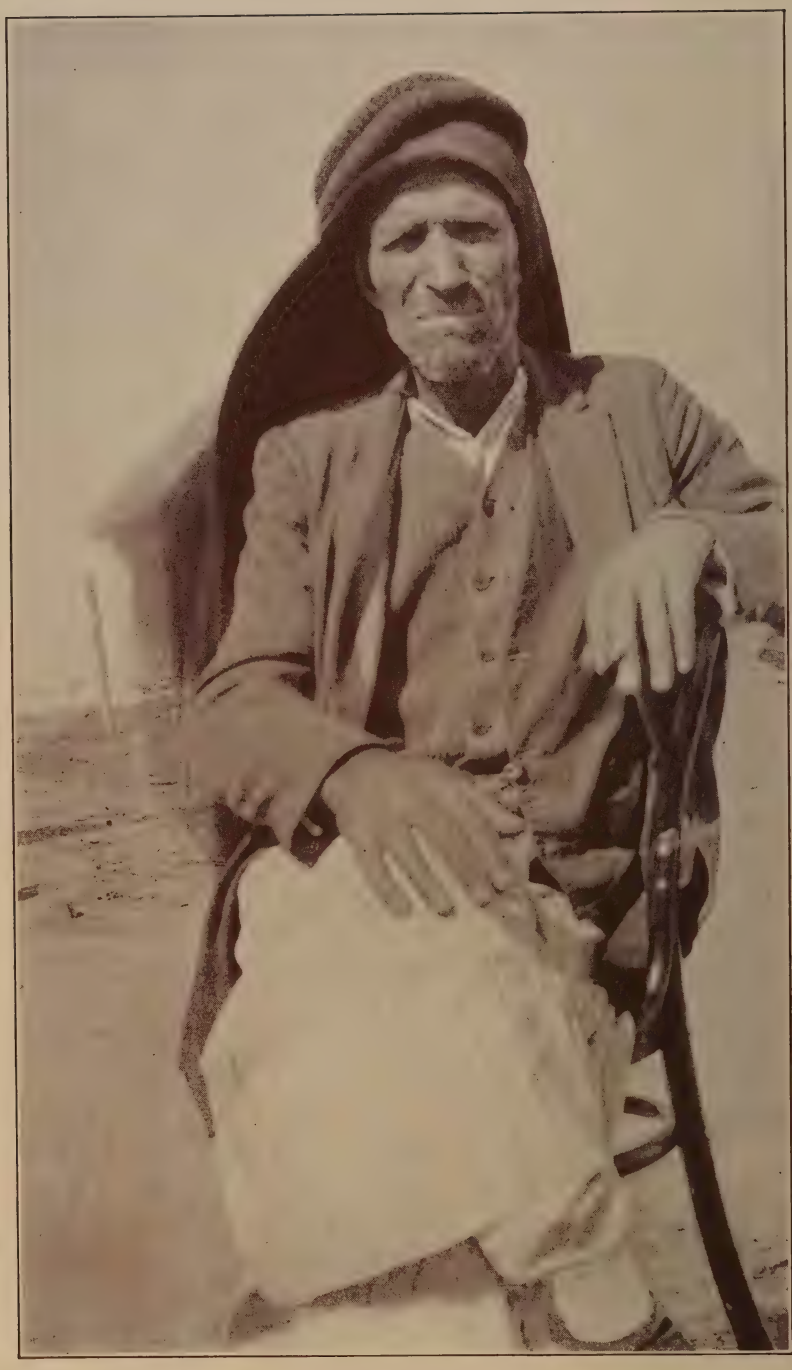
and servants follow the priestess and bring offerings. The priestess, tall and slender, with long locks hanging on her shoulders and tied around her head with a fillet, is dressed in the best Sumerian woollen material in flouncy kaunakes.

V

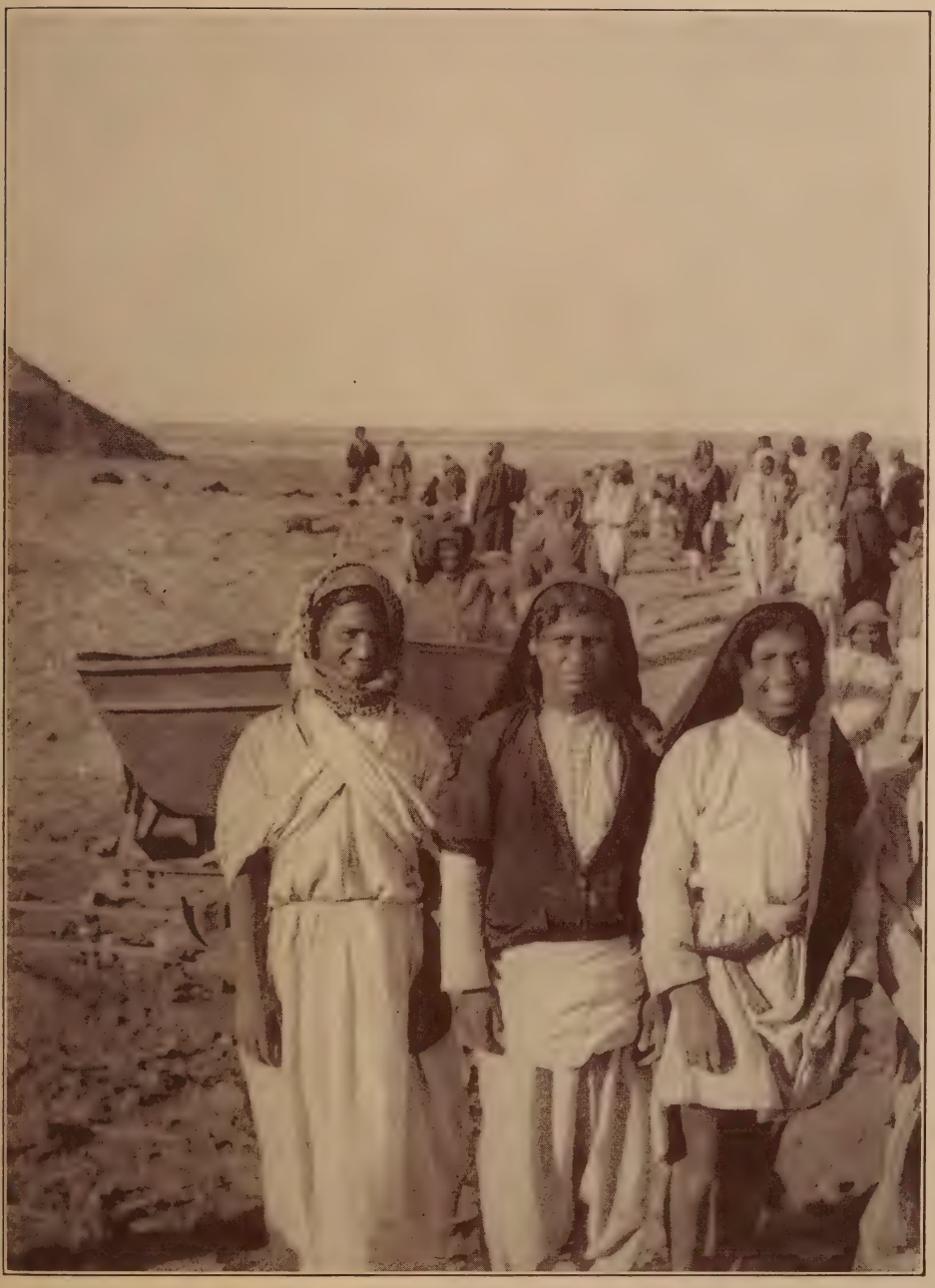
Sargon of Kish and his daughter lived about B. C. 2700. The second monument found this year, a perforated limestone plaque, is almost five hundred years older, going back to the time when the Sumerians of Ur dressed in flounced garments, perhaps a sheepskin wrapped like a kilt around their loins. Their strong prominent noses and close shaven chins and lips are very characteristic. The plaque is divided into two registers. In the upper we see libation service performed by the king in front of the Moon God. In the lower the high priest performs the same service in front of a gate, probably leading to the shrine of the Moon Goddess.

Details of this relief are of the utmost interest for a deeper understanding of Sumerian religion and worship. The Moon God is represented sitting on a throne, wearing the horned crown, and holding in his hands a small ampulla, a symbol of water and rain. The king libator standing before the deity, pours water into a slender vase resting on the ground. The king, like the priest of the lower register, is entirely naked, according to a very ancient ritual emblematic of legal purity. But the long curls of his hair float on his shoulders while the priest is entirely shaven and shorn. The practice of shaving the head was limited to a special cast. That the king should act as high priest has nothing to surprise us. He is followed by his three sons, dressed in long shawls covering their shoulders, and with long hair tied by a band.

The priest repeats the action of the king. He is followed by a girlish figure, with hanging locks, hands clasped, and a long shawl covering both shoulders. By all indications she must be the high priestess, daughter of the king, and wife of the Moon God, playing on earth the part of the Moon Goddess, the great lady of Ur. The scenes on this very ancient tablet, taken together with the condition of the temple where we found it, make it possible for us to reconstruct the libation scene before the very altar and on the same pavement that was made warm by the naked feet of the priestess more than five thousand years ago. It is especially easy to reproduce these temple scenes when the deep blue shadows of a moonlit



Hamudi ibn sheikh Ibrahim, our best foreman. A study.



Our workmen and a happy smile. Many of the boys wear long plaited hair, and long skirts that they tuck up for convenience.

night add a touch of mystery while hiding the decay of centuries. The crescent moon over the Ziggurat is elongated like a canoe and the evening star is a clear diamond in the sky and the desert is a great retreat of silence and solitude.

VI

We will visit in her house at Warka, Ninni Ishtar, the goddess of the evening star, the daughter of the Moon God of Ur. Warka and Ur in the days of Abraham were great fortresses of the south, no longer capitals, but great cities in the dominion of the kings of Larsa. The total destruction of the walls of Ur and Warka was the sign of the entire submission of the South to the kings of Babylon in the days of Samsuiluna, son of Hammurabi.

Warka, the Erech of the Bible, is the largest ruin next to Ur in South Babylonia, fifty miles distant, on the other or eastern bank of the Euphrates. We are a party of archaeologists under the able guidance of Miss Gertrude Lowthian Bell. The night is spent at El-Khidr on the bank of the river.

Early in the morning the long sarifa boat, three boatmen, three armed policemen are waiting for us. A thin mist, like incense, is floating from the earth toward the rising sun. No wind stirs the long lines of violet clouds. The palm trees cut dark shadows against the sapphire and gold of dawn. An irrigation wheel is creaking and whining. A small Arab boy chanting a tune surveys the teams of bulls and cows moving up and down the pit, pulling the leather buckets full of water. The small hamlet, the crumbling mud houses round the open square are deserted and silent. Our boat is off, good mattresses, rugs and pillows line the bottom of the sarifa and invite to a leisurely rest in the long hours of our sailing. The sail has been unfurled. A strong wind catches its poor cotton material. The ropes of palm fibre look weak. Glory to Allah. We shall perhaps arrive. The boards are of teak wood imported from India. Native trees supplied the cross pieces, all crooked and full of knots. "The father of a boat," our pilot, squatting on the rear deck, is a good Arab, bearded, full of mirth and excitement. His two mates, with bare legs and dirty floating shirts, keep running on the narrow sides, helping with long bamboo poles in dangerous turnings.

Willows extend into the shallow waters and noble palm trees beckon from the shore. Arab villages, mud houses, fighting towers, glide in turn along the rippling water. Under the strong breath of

Wild Arab dance of our coolies on pay day. They are brandishing their baskets and spades, the native implements. The triangular spade, with a long reed handle, has a cross piece of wood to rest the naked foot.

Pay day. The workmen sitting in a circle round the table on which the cash and the book of names have been laid under guard.

the wind, the Euphrates is all astir and our sarifa cuts across the waves, bumping and creaking. The sail keeps flapping right and left. Our boatmen are running, calling with excitement, shouting orders. We turn off the main river into a canal as large as the Euphrates itself. The water is very high, no straight lines, but all winding and misleading cuts and turns. When the wind leaves off, one of the boatmen jumps into the water and pulls from the shore with a rope, wading deep at times, with no stopping in his work, simply pulling his shirt up below his arms. At a distance, emerging from the water, torso and muscles in full action, he looks like a bronze statue, his dark skin glossy with rippling water.

We sail across a small inner sea. The mud fortresses on the shore look like impregnable castles. Game birds—geese, herons, ducks, pelicans—tempt in vain the rifles of our guards. We land safely two miles away from Warka, and walk across the plain to the ruins.

The wind is stronger, raising clouds of dust. This visit will be a trial. We reach the city wall and the two story Parthian palace. The ground is littered with blue and yellow fragments of enamelled bricks. The illegible stamped bricks of the builders lie on the soil, still keeping their secret. The Wuswas, the old brick tower, has long lost its baked brick facing. The mud core is exposed, showing the reed layers between the adobe. This huge pile once supported a shrine of Ninni Ishtar, goddess of love and the daughter of heaven.

The dust is now intolerable, clogging nose, mouth and eyes. We wander over the immense ruin like so many ghosts. Deep wadis cut between the various mounds. We tumble over glazed Parthian pottery and coffins which cover the ground with their débris. The bricks of Warka are of a poor quality, not to be compared with the fine bricks of Ur.

It is time to sail back after collecting a bag full of relics. The wind is against us. Our boat cuts across the waves like a seagull, with a strong list, till water jumps inboard. It is a marvellous ride up to the Euphrates, where two men leave the boat and the long dull process of pulling from the bank begins. We have all the leisure we want to admire the gold, purple and violet sunset. Birds of prey with spreading wings glide through the air over the river. Pigeons and turtle doves leave the shelter of the palms to swing and soar and turn in graceful squadrons.

Three sons of the desert. Hamoudi, Ibrahim his son, and a guard on their way to a feast of shiekh Monchet.

It is night again. The water is nearly black and the wind cold. I lie down on the rugs under the side of the boat. Stars are coming out one by one. Our men on the shore are black shadows. Time has no value as I keep listening to Miss Gertrude Bell telling of her long journeys through Greece, Asia Minor, and Konia, of her meeting Sir William Ramsay and providing for his camp welfare in the desert; of her long, entrancing travels and discoveries in Arab lands. What a dream of energy, ambition, curiosity, wild rejoicing in a clear mind, a strong will and a healthy constitution. A dear memory of a queen of archaeologists.

The fourth campaign of the Joint Expedition to Ur has finished its work. It has much to its credit in the way of discoveries: new light on the past, more knowledge of human experience, more contacts with antiquity. It has brought to light statuary, inscriptions, hymns, prayers, sanctuaries and pictured scenes of a very early period. Much more remains to be recovered and the work will be renewed in the autumn of the year, but for the present we must resign the ruins to the desert. As I take leave of Ur once more, all is silent except the call of an owl, the howling of jackals that live in holes in the great tower, and the rattle of loosened earth falling into our empty trenches.

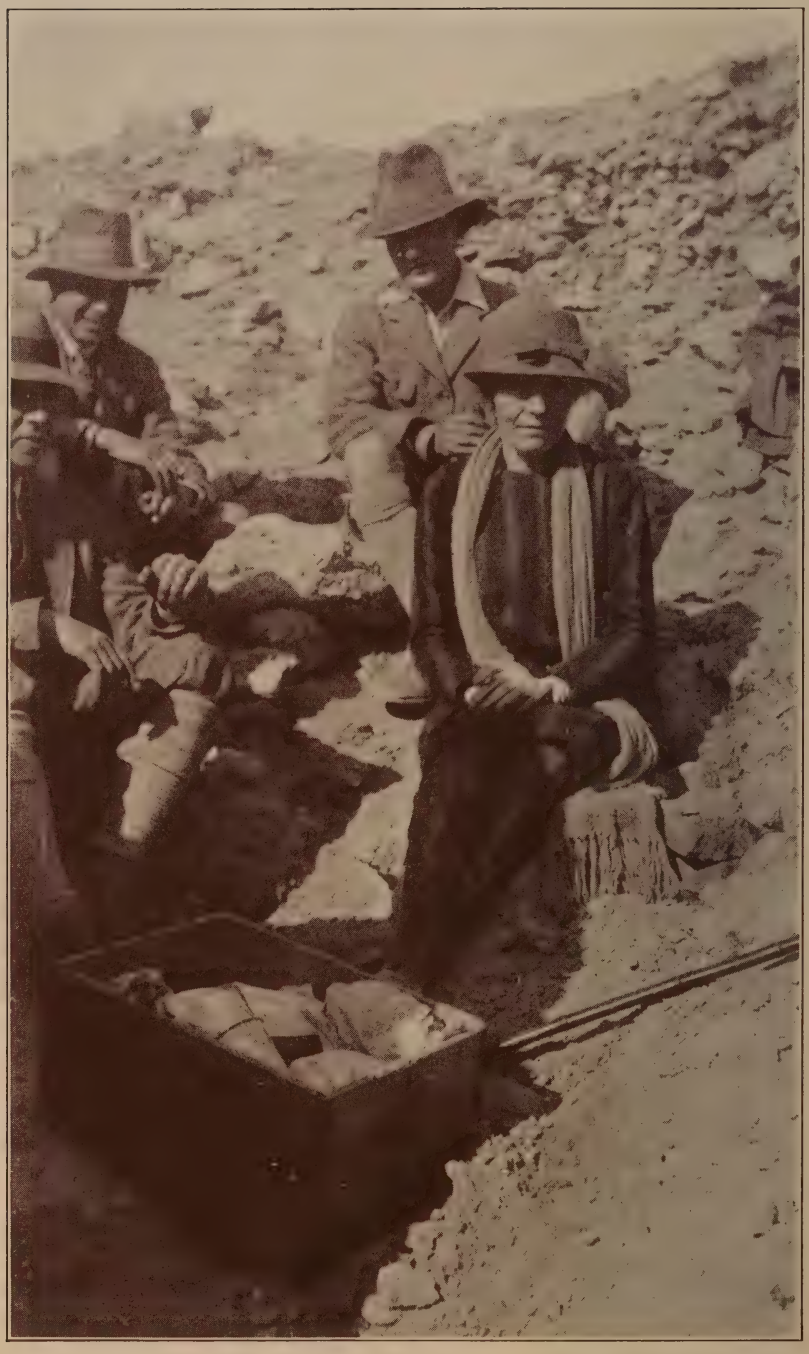


Photo by Mr. L. Smith.

MISS BELL AT ABU SHAREIN

The picture on the opposite page shows the Hon. Gertrude Lowthian Bell with members of the Joint Expedition, at the ruins of Abu Sharein, ancient Eridu, the oldest Sumerian city in the country. The site is about twenty five miles southwest of Ur in the desert. The picture was taken in January, 1926, when the party made an excursion from Ur and were picnicing on the site of the oldest house discovered. The picture has a unique interest.

On the 12th of July last the news was cabled that Miss Bell had died during the previous night at her home at Bagdad. Among the numerous tributes which this sad intelligence called forth in Europe and America, the London *Times*, in a long obituary, spoke of Miss Bell as "the most distinguished woman of our day in the field of Oriental exploration, archaeology and literature." This is the unanimous opinion of scholars, travellers, administrators and of all who in any way were brought into relations with the Near and Middle East.

As an author, Miss Bell's fame rests chiefly on her two books: "Syria, the Desert and the Sown" and "From Amurath to Amurath," in both of which the author described some of her travels and explorations in the East. Of her greater journeys, however, no account ever was published. Among these must stand preëminent a journey that Miss Bell made alone, just before the outbreak of the War, across the Arabian desert to Bagdad, a journey that had previously been performed by one European woman only, the Lady Anne Blunt, Byron's granddaughter, who, however, was not alone on that journey.

During the time that the Joint Expedition of the Museum of the University of Pennsylvania and the British Museum has been at work at Ur, Miss Bell has served the Government of Iraq as Oriental Secretary and Director of the Department of Antiquities. It was largely through her interest, energy, enthusiasm and profound knowledge of the country that the way was cleared for the labours of the Joint Expedition and for the advancement of archaeology in Iraq. Miss Bell's latest work was the organization of the Department of Antiquities and the founding of a Museum in Bagdad.

Dr. Legrain at Ur.

ADDITIONS TO THE AMERICAN SECTION

By J. Alden Mason

I

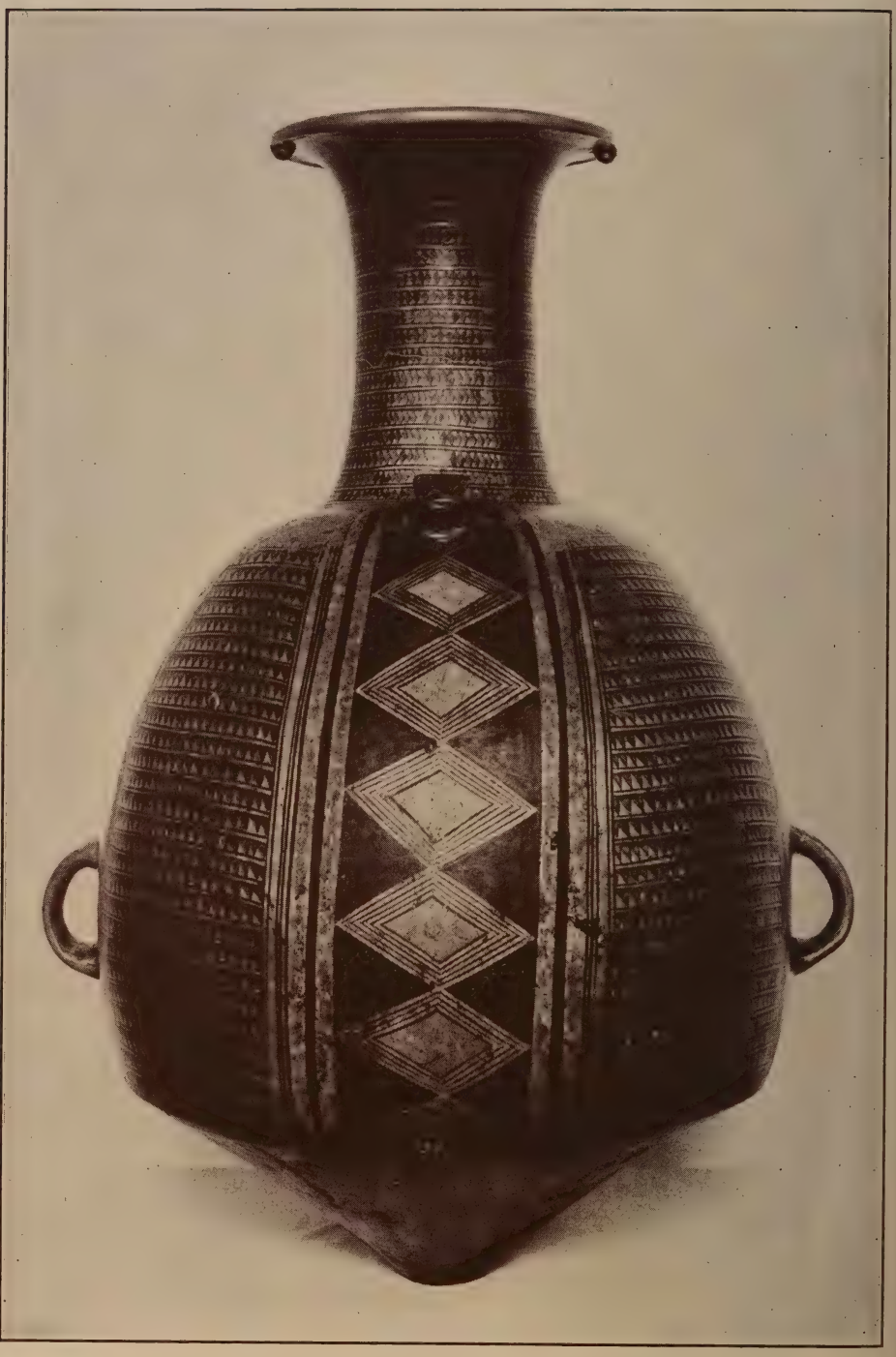
A Peruvian Aryballus

By gift of Mr. F. C. Durant the Museum has acquired an excellent and unusually large Peruvian aryballus, the most typical pottery vessel of the Inca period immediately preceding the Spanish conquest of Peru. It was secured in Peru by Mr. Durant in 1886. Seldom are these large vessels found intact, most of the known examples having lost their necks and rims. In the case of the Durant aryballus, the upper part of the neck and the rim were missing and the appearance of the break indicated that the damage had occurred in ancient days and the vessel retained in service, unmended. However, the lower half of the neck being intact, it was possible to restore neck and rim by comparing and copying those of the few large and the many smaller complete known examples.

As restored, the Durant aryballus stands forty inches high, one of the largest of its type. Indeed, only one larger example is known, with a height of approximately forty eight inches. According to Bingham, aryballi of ninety centimeters height—practically three feet—were not at all uncommon at Machu Picchu, the Inca city excavated by him, and this is approximately the height of several such figured in publications of European museums.

The forty inches of height is divided into an inverted conical base of seven inches, a body of twenty inches and a neck and rim of thirteen inches, the upper eight inches of which are restored. The body therefore occupies exactly half of the total height, the neck approximately one third and the base one sixth, the proportions being those which produce a vessel of considerable artistic beauty. The width of the rim is twelve inches, approximately equal to the height of the neck, and the greatest width of the vessel, exclusive of the handles, is twenty four inches, just twice that of the rim.

The massive vertical loop handles are set low on the body and a large knob, in the shape of a conventionalized animal's head, probably a llama's, occupies a prominent place on the front of the vessel near the base of the neck. These elements are constant



The Aryballus, a great Pottery Vessel of the Peruvian Incas.
Gift of Mr. F. C. Durant

features of the Peruvian aryballus, a standard type admitting of slight variation. The tiny nodes under the rim are also constant features, invariably on the same side as the handles.

The painted decoration is very typical of the Inca period, the range of variation in design being very slight and limited to a few characteristic motives. The colour scheme is equally simple, buff, red and black, the former two being employed mainly for backgrounds or slips.

A small effigy vessel in the form of a porter carrying an aryballus. This illustrates well the use of the aryballus for the transportation of water and other liquids. The rope passing over the chest of the porter and through the handle of the aryballus is well shown. (From Baessler's "Ancient Peruvian Art.")

The aryballus, so named because of its superficial resemblance to a type of Grecian vessel of sack shape, is found wherever the Incas penetrated. Conversely, it is never found beyond the field of their conquests, except for occasional pieces carried afar in trade, or rude imitations made by surrounding peoples.

The aryballus was doubtless used as a container for liquids, though the great variation in size, from five inches to four feet in height, indicates a corresponding diversity of use. Thus the smaller ones were probably employed as phials for precious fluids or as mortuary offerings in sepulchers, and the very largest, too heavy for ready transportation, probably stood in temples as receptacles for water or the native beer, chicha. Accurate representations of the use of aryballi of moderate size are found in the form of certain effigy jars. The vessel was carried high on the back, the angle of the body apparently fitting into the neck of the porter. A band or strap passed across the shoulders and chest of the porter, through the vertical handles and up over the animal knob at the base of the neck, this latter artifice preventing the topheavy vessel from upsetting. The form of the vessel is well suited to this purpose and there can be little doubt that its primary purpose was for the conveying of water in this manner. The ease with which water could be poured out of the vessel into a cup in the hands of the porter without putting down the ponderous urn is obvious. The orifices in the small nodes at the neck undoubtedly served to tie on the cover which protected the liquid from contamination.

II

An Unusual Stone Vessel

Another Inca Peruvian object of great interest and beauty has been lent by Mr. Durant to the Museum. This is a massive bowl of heavy hard black stone, the surface profusely decorated with coiling and wriggling serpents in half inch relief. These are quite symmetrical and equilateral. Fourteen snakes compose the decoration, one coiled in the center of each side and three wriggling to either side of these.

The purpose to which such an object was put must remain largely conjectural. Not many specimens of this type are known, and most of these are distinctly smaller and plainer. Only one similar bowl is known to the writer, one almost exactly similar except that it is apparently larger in size, illustrated by Joyce in his "South American Archaeology." It is there termed a "stone mortar carved in the Cuzco style." That it served as a mortar is, to say the least, doubtful and it is far more probable that it stood in an ancient Inca temple to hold or receive offerings or perform some kindred ceremonial and religious function.

Inca Ceremonial Stone Bowl carved with Serpents in Relief.
Lent by Mr. F. C. Durant.

III

A Puma Stone Cup

One of the most interesting and altogether puzzling artistic objects secured by the Museum recently is a small but massive and heavy stone figure of a feline animal, probably a puma, bearing on its back and sunk into the body a deep conical cup, all carved out of a solid piece of heavy hard black stone taking a good polish, practically identical with that used for the stone serpent bowl.

The stone puma has a maximum length of 13 inches, a width of 5 inches and a height of 7¼ inches. The rim of the cup has an outside diameter of 5 inches and an inside diameter of 4 inches, the walls being therefore a half inch in thickness. The cup is 3½ inches deep, the sides straight and converging towards the flat bottom, which is 2¾ inches wide.

Of massive proportions, highly conventionalized and symmetrical, perfectly finished, the surface covered with various decorative motives in low relief or incision, the specimen makes a most attractive and interesting figure.

The body is ponderous and the legs short, thick and mainly revealed in relief against the body, below which they extend for only one inch. The feet are shown as rectangular blocks with broad, flat bases. The tail also is shorter and more massive and the head much larger and more massive than is natural, but typically catlike with sub-semicircular ears, deep depressed oval orbits which may originally have been inlaid with eyes of another material, the mouth broad and conventionalized with the canine teeth prominent, slightly curving and projecting beyond one another.

The entire surface with the exception of the plain sides of the cup which projects above the level of the back is covered with carved designs and decorative motives in low relief or incised lines.

In the center of each flank is seen the principal decorative element, carved in low relief. Imagination may discern head, eye and tail but no vestige of limbs, and interpret it as a fish, worm or snake. Another large curvilinear figure, more enigmatic but less ornate, is seen over each rump. A large rectangular Helvetian cross is delineated on each thigh and others distributed on the body, including a string of eight around the neck, making a total of fourteen crosses. Of somewhat similar nature are three pairs of curvilinear, four-petaled rosettes found on the forelegs,

Puma Effigy Stone Vase, probably from Tiahuanaco, Bolivia.

cheeks and forehead. Various other small symbols and motives are carved on the borders of the body.

The massive tail is divided into segments by means of encircling incised lines, frequently of a chevron shape, and the outer and upper side of the tip is decorated with parallel short incised lines and one concentric circle. At the base of the tail on the upper side is carved a single sigmoid or figure 8 element through which a small depression has been drilled. There is a similar hole in the forehead. It seems most probable that small sticks on which banners were hung were placed in these holes.

From each eye depend two short objects in low relief, on each of which are two larger buttons. These may be interpreted as being of an illustrative rather than of a purely decorative nature, and may tentatively be termed tears.

These and other decorative or symbolic elements, nearly covering the surface of the figure, present an interesting question. In how far are they conventionalized representations of the actual or fancied markings and features of the animal, in how far are they purely decorative and irrelevant, and to what degree are they esoteric symbols in some ceremonial way connected with the worship or religion of which the puma may have been a principal factor? It must be confessed that the archaeology and religion of ancient Peru are too little known to give an answer to these questions. Probably certain of the decorative ornaments would fall into each of the three classes.

As is so often the case, the puma figure came to the Museum with no record as to its provenience. This adds to its problem. Typical pieces can be assigned their places with considerable assurance, but unusual specimens such as this are often difficult to locate.

The stone puma apparently belongs to one of the ancient cultures of the highlands of Peru or of the adjacent portions of the surrounding countries, and probably to the oldest of the high cultures of that region, that known as Tiahuanacan, from the name of its ancient center on the shores of Lake Titicaca on the border of Peru and Bolivia.

The puma is the characteristic animal of Tiahuanacan art, and is found carved in stone, moulded in pottery and woven in cloth. The two latter forms are the more common, stone pumas being very rare. Puma heads are frequently attached to pottery vessels; these are generally somewhat conventionalized, with the faces upturned

The Stone Puma from the side, showing the Ornate Decoration.

like the present specimen, but are normally plain and lack the ornate decoration, which makes comparison more difficult.

The concept of a figure, human or animal, with a depression in the upper side which forms a bowl or cup, is one which must have occurred independently to artists in many places and times. It is found, I am told, in the Orient, and occurs in several widely separated regions in America. In the National Museum in Mexico City is a great and beautiful figure of a jaguar or ocelot, another member of the cat family, with a deep and wide round cavity in the back. It is, however, reclining, naturalistic and unornamented, differing in everything except general concept from the present specimen. Such objects were known in ancient Mexico as *quauhxicalli* and stood in temples on or near the altars to receive and contain the hearts of the sacrificed victims. Another very similar form of figure in Mexico was that of which the well known statue generally termed Chac Mool is the type. This consists of a recumbent human figure in whose abdomen is a cavity for the reception of offerings. These are generally interpreted as gods of *octli* or *pulque*, the native drink of Mexico. This latter type, however, has even less in common with the stone puma now before us.

The puma is thus a characteristically Tiahuanacan artistic and esoteric animal, and the shape of the bowl or cup is also Tiahuanacan, although the general concept of the figure is one occurring in many places in America and elsewhere. Furthermore, the general scheme of decoration, a lavish covering of the object with extremely conventionalized design elements, is characteristic of Tiahuanacan art.

As regards the design elements themselves, there is not one that can be called typically and solely Tiahuanacan. Several, however, are very characteristic of the general Andean region. The Helvetian cross, while apparently not a common Tiahuanacan element, is found constantly in the art of the Diaguite region of northwestern Argentina, which was an offshoot of the Tiahuanacan, and is not infrequent in the art of the Incas, in many respects the lineal descendants of the Tiahuanacans. The same may be said of the rosettes. On the other hand, these two elements are practically unknown in Mexico and Central America; they are peculiarly Peruvian.

The "tears" descending from the eyes are another characteristic which links the figure to the Tiahuanacan culture. The Weeping God was the primary deity at this great culture center, occupying the central position in the great monolithic gateway which is one of

the great accomplishments of aboriginal America. The weeping eyes are also commonly found on the great burial urns of the Diaguite-Calchaqui region of northwestern Argentina, a culture closely connected with Tiahuanaco.

As regards the scrolls, sigmoid motives and smaller decorative elements, they appear to find their closest counterparts in the art of Chavin de Huantar, a culture center in the lower highlands of Peru. The art of this culture is still imperfectly known but seems to represent a blend of, or a mean between, the art of Tiahuanaco and that of the southern coast.

As the result of our careful examination of the stone puma, therefore, we determine that, if not of pure Tiahuanacan origin, at any rate it was produced by a culture closely related to and profoundly affected by that of Tiahuanaco.

IV

Extraordinary Peruvian Gold Vases

Another important accession to the Peruvian collections was made last year in the form of two unusually large and excellent gold effigy vases. These were carried from Peru to London in 1888, according to our informant, and from there secured by purchase.

Effigy vases of this type are among the most typical objects from the northwestern coast of Peru and are considered characteristic of the Chimu culture which flourished there in pre-Inca days. Most of those known, however, are of silver, gold vases being comparatively rare.

These two vases are of approximately equal height but of different widths. Both are made of thin and apparently pure sheet gold, that of the smaller specimen being slightly heavier. Technically, they are admirable and puzzling productions, inasmuch as each seems to have been hammered out of one single piece or sheet of gold, being without seams. The difficulty of such an operation can hardly be realized by the novice. The features, and possibly the entire vessel, were beaten into shape and proper thinness over a form of stone or wood. The smaller vessel, it is true, is pieced, though even this is done in a remarkable manner. The main part of the tube ends just above the forehead of the face, where it is hammered out into a thin tenuous edge. Another tube of equal width and proper length was prepared, also apparently hammered

The Stone Puma, showing the Weeping Eyes and the conventionalized Nose and Mouth.

out of a solid piece of gold without seams. The lower end of this was then slipped over the upper end of the main tube for a distance of about five sixteenths of an inch and the whole then hammered together, apparently without soldering or welding. On the exterior the hammering has been done so as to make a firm juncture, but on the inside the sharp ends of the lower tube have not been joined to the main vessel and project beyond the surface. The upper rims are thicker at the edge than the walls throughout the vessels, but it is uncertain whether the metal here is solid or whether the thin sheet is bent over upon itself and hammered down, leaving an interior cavity.

The height of the larger specimen is 12¾ inches and the weight is slightly more than 13¼ ounces. The other specimen measures 12½ inches in height and weighs nearly 14 ounces.

The region of the Gran Chimu, on the northwest coast of Peru near the present city of Trujillo, from which these gold vessels probably came, was one of the great culture centers of ancient Peru. Commencing in the hot and, when well irrigated, very fertile valleys, in early times, the inhabitants had achieved a very high grade of civilization, as manifested in their architecture, pottery, textiles, woodcarving, metalwork and other products long before the forces of the all conquering Incas from the highlands of Peru near Cuzco, about the year 1400, added the Chimu Kingdom to the great Inca Empire and to some extent imposed Inca culture upon its people.

The quantity of the gold objects made by the ancient Peruvians is almost incredible. The fabulous treasures of Atahuallpa are not within the scope of this present article, but in this same Chimu region traditions of immense treasure in buried gold have ever incited the lust of adventurers. Tradition has it that upon the coming of the Spaniards, the news of their gold fever having preceded them, two enormous treasures in gold objects were buried, known ever since as the "Great Fish" and the "Little Fish," *peje grande* and *peje chico*. Shortly after the conquest a renegade chief, Cacique Tello, confided the secret of the *peje chico* to Don Garcia Gutierrez de Toledo, who at once made use of his information to such good effect that the "Royal Fifth" claimed by the crown amounted in value to $1,250,000. As a result most of the inhabitants of Trujillo have spent the last four hundred years searching for the *peje grande*.

The two wonderful gold cups now in the Museum are the largest of their kind known. Larger cups of silver are known—the Museum

itself possesses one much larger, but I am unable to find any record of gold vases so large. The one illustrated by Lehmann in "The Art of Old Peru," which comes from Ica, much further to the south, whither it must have been taken in trade, is hardly more than half as high.

V

Two Mexican Stone Masks

The Mexican collections of the Museum have recently been enriched by the acquisition of two stone masks formerly in the John Quinn Collection. Both of these are exceptional pieces, among the finest of their kind, although stone masks are by no means rare objects in large collections of Mexican archaeology. Most of them, however, are either small or of indifferent and rude workmanship and pieces of real excellence are rare.

The smaller mask is a beautiful specimen of translucent apple green marble, resembling jade in its translucency and high polish. Its height is approximately equal to its width, about six inches, and the maximum thickness, from back to tip of nose, is just half of that. The face is, therefore, slightly more flat than natural, the nose somewhat less prominent, and the forehead flatter.

The back of the mask is concave. The ears are shown in a conventionalized fashion, narrow and rectangular, but on the other hand, the facial features are remarkably and unusually well carved. The eye orbits are deeply hollowed out, the lids being outcurved in very naturalistic fashion. The corners of the eyes contain shallow drill holes; these may be traces of the process of carving—it is known that in the later period of Mexican art much carving was done, especially in the softer stones, by drilling shafts with a hollow drill and breaking away the cores and the walls—but it is more probable that they were intended to aid in holding the inset eyes with which the finer masks frequently were provided, but which in most cases have disappeared with the passage of time. These eyes were generally of bone or shell with the irises painted black, or even with hemispherical irises of iron pyrites inserted in eyeballs of bone. The supraorbital ridges, the cheeks and the chin are all very well depicted. Though the nose is somewhat flat, the wings are well portrayed and drilled cavities simulate the nostrils excellently. The mouth, too, is admirably done with protruding lips of natural shape and a deep mouth cavity in which it is possible teeth made of bone

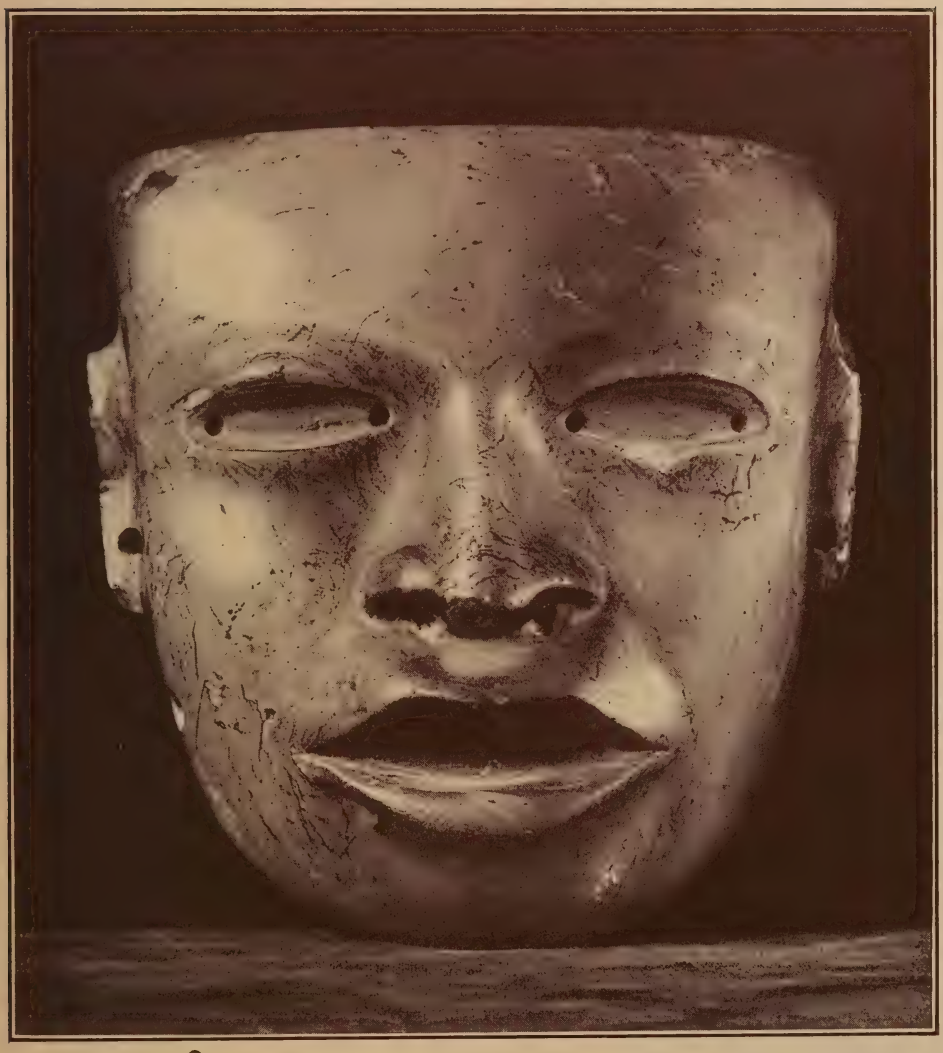
Two Gold Effigy Vases from the Chimu Culture of Northwestern Peru.

were once displayed. Statues and masks in which the inset teeth still remain are known, but they are even rarer than the inset eyes. Shallow drilled depressions are seen in the corners of the mouth similar to those in the eyes.

In six different places, three on either side of the face, are biconical drilled perforations. That is to say, with a pointed drill, which when revolved drilled a conical hole, wide at the surface and pointed in the interior, the maker drilled three deep depressions on the front and then three from the back on either side, so that each pair of drillings met in the center of the stone and left a perforation through which cords or wires could be passed.

Perforations are found on practically every Mexican mask, but generally only one pair of them. These are interpreted as having been used for suspension or attachment and such was probably the use of the upper pair of perforations of the present specimen. Of the lower two pairs, those on the left side show certain evidences, and those on the right suggestions of copper corrosion. It is, of course, a dangerous matter to draw deductions from the appearance of an object which may have been in the possession of dozens of persons in the last four centuries and subjected to various kinds of treatment, but had the mask been recently excavated, the deduction would certainly be warranted that the copper corrosion was evidence of the former presence of copper rings in the ears.

The second mask is somewhat larger than the preceding, 8¼ inches in length and 7½ in width, but the thickness is less, 2½ inches. It is therefore much flatter and consequently less naturalistic than the former. The material is a dark green opaque mottled stone of no great degree of hardness, taking a good polish, probably steatite or serpentine. The eye orbits recede from the supraorbital ridges in a sweeping curve. The eyes form the most interesting feature of this mask. They are represented as elongated ovals, sinking abruptly from the edges of the lids. The interiors of these sockets lack the drilled depressions seen on the other mask. It is possible that eyes and mouth in this specimen also were filled with inset eyes and teeth but this seems improbable in view of the peculiarity of the eyes. In the center of each eye, symmetrically placed, is a spot of light colour in the stone, vertically oval. The two spots are of approximately equal size. In colour they are a light yellowish green with a rather sharp but irregular limit and in certain places a thin band, intermediate in colour, is seen between the light spot and the natural dark stone.



Mexican Marble Mask of Toltec Manufacture.

Toltec Stone Mask in which Natural Discolorations have been made to serve as Eyeballs.

The question at once arises as to the origin of these spots of lighter colour. Although they appear perfectly natural, the author was for some time inclined to think that they might have been produced artificially, possibly by calcining with fire, after the carving of the face. The nature of the spots, however, proves that this could not have been the case. On the main surface both spots were evidently originally circular, indicating that they were actually spherical. They therefore are at their greatest dimensions at the edges of the lids, where they average 1¼ inches in width. In the interior of the eye cavities, however, the width has decreased to a maximum of one inch, indicating clearly that the discolored area was originally in the shape of a sphere before the carving of the eyes was commenced.

The deduction is obvious, then, that the piece of stone selected for the carving of this mask had in it two spherical spots of discoloration of approximately equal size and that the sculptor cut the mask with the eyes to fit the position of these two spots. Possibly he had had the idea for some time and had long been searching for a piece of stone thus marked. Be that as it may, the mask is unique; I remember no other example like it.

The purpose for which masks served in ancient Mexico has never been satisfactorily explained. It is very doubtful if any of these heavy stone objects were actually worn on the human face; they are too massive, the backs are not properly hollowed out and the eyes and mouth are generally not perforated. There is some reason to suppose that they may have been mortuary and placed with the dead in tombs, but others may have hung in temples as religious objects or in palaces and the houses of the wealthy as ornaments.

Such masks are generally accepted as being from the Aztec period, the last and greatest period of Mexican culture. Some, apparently, were made by Aztec artists, but the specimens under consideration have the appearance of Toltec far more than of Aztec art. The Toltecs were the cultured nation of artisans who preceded the warlike Aztecs in the Valley of Mexico and from whom the Aztecs assimilated most of their culture. While Toltec ascendancy was lost, their blood and their art continued unabated in certain parts of the country such as Texcoco and Tlaxcala, and Toltecs were everywhere employed as skilled artisans. We may therefore consider these masks as of Toltec manufacture.

A Mexican Stone Head of the Aztec Period.

VI

An Aztec Stone Head

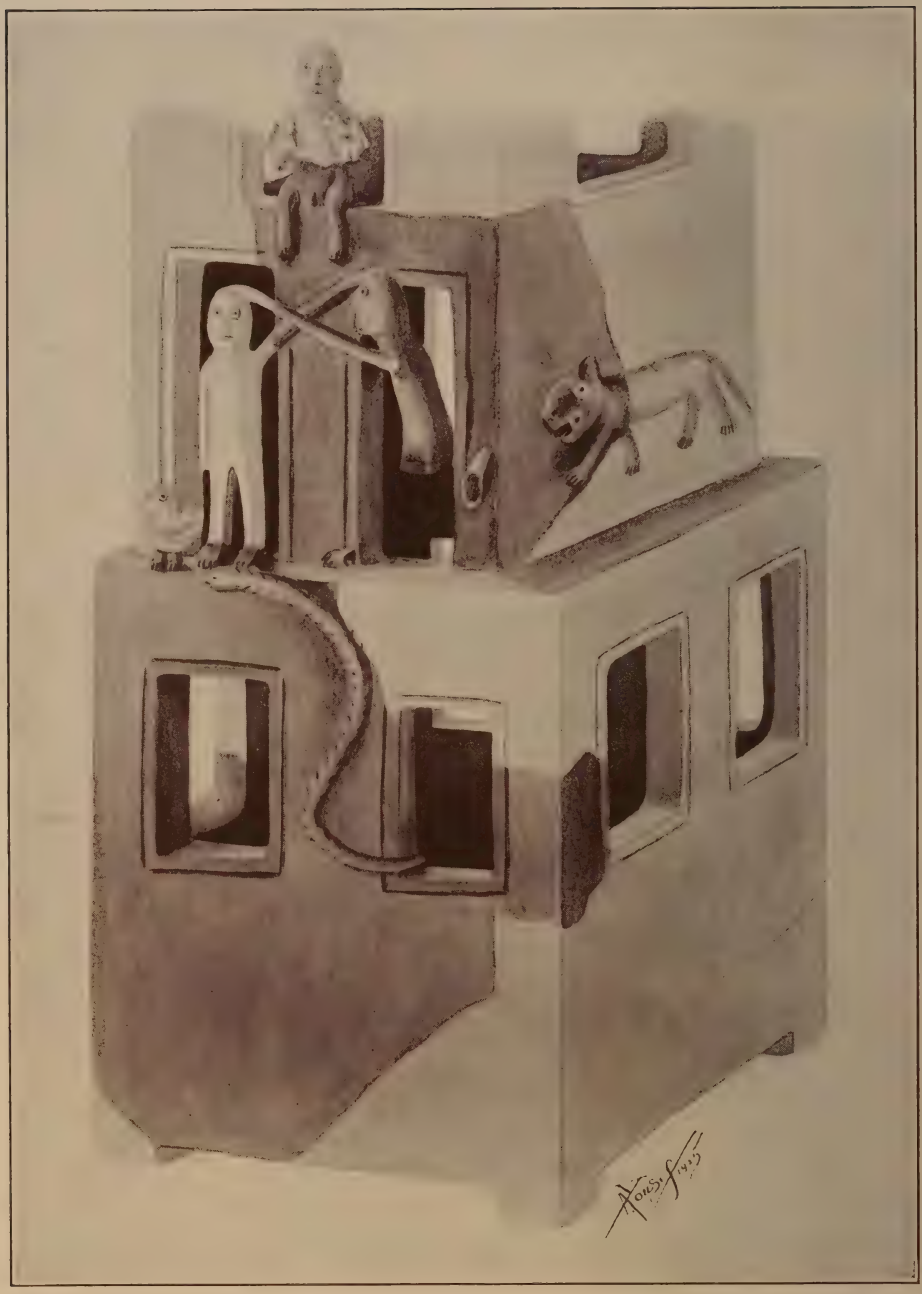
Another important accession of 1925 is an excellent stone head. This, in contradistinction to the Toltec masks, is typical Aztec art and probably dates from a period not long preceding the Spanish Conquest, possibly about 1500 A. D. The material is a heavy black stone which takes a high polish but shows a rough crystalline fracture.

The carving of the face ends at the chin, neither neck nor body being shown, but above and to the sides of the face is shown in low carved and incised relief a typical Mexican headdress such as is seen on many Aztec statues of the full figure. There is considerable superficial resemblance in this to Egyptian headdresses, so much so that the layman always sees a close relationship, if not actual identity, between them. These resemblances, however, disappear upon a closer comparison.

Across the forehead extends a band, shown in slight relief, on which is a line of six circles or ovals in slightly higher relief. Above this are four narrow horizontal bands or stripes made by incising five parallel horizontal lines. This probably represents either headdress or coiffure just as the line of the circles probably represents a forehead band.

The ears are represented each by a large circle in low relief, within which is a smaller concentric incised circle. This is the conventional method of showing the ear, not only in Mexico but throughout a large part of America and portions of the Old World. It represents the great earrings, made of jade, obsidian or other semiprecious stones, which were inserted in the lobes. These great ear ornaments were especially favored by the chiefs and men of importance and consequently were applied to figures of divinities.

The general appearance of the headdress, and especially the forehead band with its circles, identifies the deity represented as Chalchiuhtlicue, the Goddess of Running Water and the wife of Tlaloc, the great and terrible Rain God. Her figure is one of those most frequently met with in Mexican archaeology.



Pottery cult object in the form of a model of a shrine. From a room outside the Temple of Ashtoreth. Height 25 inches.

THE TEMPLES OF DAGON AND ASHTORETH AT BETH-SHAN

By Alan Rowe

DURING the campaign of 1925–26 the Museum's Expedition at Beisan, ancient Beth-Shan in Palestine, discovered altogether four Canaanite temples, two being made during the time of Rameses II, King of Egypt 1292–1225 B. C., one under the reign of his predecessor, Seti I, 1313–1292 B. C., and one during the Tell el Amarna period, 1375–1350 B. C. The evidence shows that the southern temple of Rameses II was dedicated to the warrior god Resheph, and the northern one to the warrior goddess Antit-Ashtoreth, whose monument was discovered in the building. From the time of the erection of these buildings, as the evidence proves, up to the time when King David drove out the Philistines, about 1000 B. C., worship was carried on in both the temples, first of all by the Egyptians and their mercenaries, and later by the Philistines. These peoples seem to have taken possession of Beth-Shan at the death of Rameses III in 1167 B. C. But already before their time, as the evidence indicates, there were Egyptian mercenary troops at Beth-Shan, who, like the Philistines, came from the Aegean-Anatolian regions. At the death of the Egyptian king these troops probably took possession of the place for themselves and mixed with the incoming Philistines, whom the Egyptians knew as the Pulesti. The newcomers are never themselves described as mercenaries of Egypt but always as enemies. Burials of Egyptian mercenaries were discovered at Beth-Shan in 1922; they comprised peculiar anthropoid pottery sarcophagi of the same date (XXth Dynasty) and type as the foreign looking pottery sarcophagi found in Egypt at el-Yahudîyeh and Tell-Nebesheh. A spearhead found with a sarcophagus at the latter place is identical with that found in one of the parallel burials at Beth-Shan.

We see then that at the death of Saul in 1020 B. C. the Philistines were in actual possession of the fortress city of Beth-Shan and they were worshipping in the two temples erected by the Egyptians under Rameses II, the adoration of their Baal (whom they called Dagon) and their Baalath (Ashtoreth) doubtless being carried out in the

Pottery stand. A cult object from the Temple of Ashtoreth. Height 25 inches.

Pottery stand. A cult object from the Temple of Ashtoreth. Height 29 inches.

respective temples in which the Baal and Baalath of the Egyptians were revered. The biblical references are given in I Chronicles x, 10, and I Samuel xxxi, 10. The former passage relates that when Saul died the Philistines "put his armour in the house of their gods, and fastened his head in the temple of Dagon," and the parallel passage in Samuel informs us that "they put his armour in the house of Ashtaroth and they fastened his body to the wall of Beth-Shan." The combined evidence, both literary and archaeological, certainly shows that, in the Old Testament, the building called "temple of Dagon" was the southern temple of Rameses II; and that the building called "house of Ashtaroth" in the one place and "house of their gods" in the other was the old northern temple of the king. In the latter connection there is really no inconsistency in the fact that the same temple is termed "house of Ashtaroth (in Revised Version, 'house of the Ashtaroth')" and "house of their gods," for it must be remembered that Ashtaroth is merely the plural form of Ashtoreth. But in any case the passage in Chronicles indicates that there were two temples at Beth-Shan during the Philistine regime. The excavations have certainly proved that such was the fact.

Somewhere about 1000 B. C. King David seems to have driven out the Philistines from Beth-Shan. He was probably also responsible for the partial demolition of the "house of Ashtaroth" and the "temple of Dagon." A new floor which we found laid in the former building over the débris of destruction, and at such a height as to cover the stone bases of the four columns which they once supported, was perhaps his work. David must surely have established a sanctuary or a tabernacle to the God of Israel at Beth-Shan. If there was such a sanctuary, the only place large enough for it on the Tell (the Acropolis) was in the ruins of the Dagon temple or in the reconstructed Ashtoreth temple.

The actual walls of the temples of Seti I and Rameses II seem to have been built by the mercenaries themselves, the engraving of door jambs and stelae being the main work carried out by the Egyptian craftsmen. Some of the bricks in the temples of the latter king have signs on them which are identical in shape with certain Cretan (Minoan) signs, which fact would indicate the home at least of some of the mercenaries. Other Cretan influence is present in the shape of the cylindrical cult objects and ring flower stands. An example of the flower stand (Late Minoan III period)

Pottery stand. A cult object found in the Temple of Ashtoreth.

Ring flower vase found in the Temple of Ashtoreth in Beth-Shan.

has also been found in Cyprus, where it must have been introduced from Crete. It is of the same date as the Beth-Shan examples. All the various types of peculiar cult objects, other than the figurines of the deities, were unknown in Beth-Shan before the time of Seti I, so it was evidently some of his Mediterranean mercenaries who introduced them. The shrine houses, clay models of places of worship, are something like the houses depicted on certain Cretan faience tablets. Forms of them are also depicted on a Babylonian relief of Gudea, and an Assyrian intaglio of later date. At Beth-Shan the shrine houses were probably used as small stands for special offerings, and the cylindrical cult objects either as incense stands or as vases for sacred flowers or plants. This much we gather from certain Mesopotamian analogies.

The Syrian deities worshipped at Beth-Shan during the time of Rameses II were Antit, Ashtoreth, the Veiled Ashtoreth, Resheph, and a bearded god wearing a conical crown. During the reign of Seti I we find the following deities, Ashtoreth, and Qedesh the holy one, a form of Ashtoreth. During the Tell el-Amarna era they were worshipping Ashtoreth, Qedesh, and Ashtoreth of the Two Horns. Ishtar, the Assyrian form of Ashtoreth, was found on a cylinder seal in the temple of this era. The dove, serpent, lion, gazelle and duck were associated with this Beth-Shan goddess at all periods. Gazelle horns have been found in all the temples. The bull, which was discovered on a vase in association with the lion or emblem of the goddess, was the emblem of a god. The Hebrews themselves seem to have regarded the bull as the symbol of Yahweh. The animal was also the emblem of Hadad, the Syrian god of weather, storms and lightning.

The roofs of all the temples were undoubtedly made of wood. Those over the courtyards of the temples of Seti I and the Amarna era were supported by two stone columns with palm tree capitals. It is quite probable that the local Syrians regarded these two columns as mazzebahs or sacred standing stones and revered them accordingly. The mazzebah and the asherah (sacred wooden post) were generally found in most Syrian high places and sanctuaries. The shape of the columns in the Beth-Shan temples were certainly very appropriate, for the palm tree itself was a familiar symbol of Ashtoreth; and we also find a "Baal of the palm-tree" (Baal tamar) in a place name in Judges xx, 33. At times the Israelites departed from the worship of Yahweh and set themselves up mazzebahs and asherahs as we

Painted stone figure of a hawk wearing the Egyptian crown. From the temple of Ashtoreth.
Height 20 inches.

Shrine in the Temple of Ashtoreth. After a drawing by the staff artist of the expedition, Mr. Ahmad Yousef.

see from II Kings xvii (Revised Version). "The children of Israel did secretly things that were not right against the Lord their God, and they built them high places in all their cities. . . . And they set them up pillars and Asherim upon every high hill, and under every green tree; and there they burned incense in all the high places, as did the nations whom the Lord carried away before them. . . . They made them molten images, even two calves, and made an Asherah, and worshipped all the host [i. e., stars] of heaven, and served Baal."

The actual details of the worship carried out in the Beth-Shan temples must of course always remain unknown, but the wealth of new material which the excavations have brought forth enables us to get a very good idea of the sacred cult of Ashtoreth, the great Lady of Heaven as it was known in Palestine from the XIVth Century to the XIth Century before Christ.

THE MUSEUM AND THE WORLD OF BUSINESS

THE wide interest felt in the Museum's activities is apparent in many different places, expressed in many different ways and among people in many walks of life. The daily and weekly press of the United States and Canada and still more largely in England and the Continent, repeatedly calls attention to these activities, with emphasis on the work of the expeditions in Mesopotamia and Palestine, the results of which are announced at length, not only in journals devoted to scientific interests but in the news columns of the daily press and on their editorial pages.

Another evidence of this widespread interest consists in the numerous letters received at the Museum about particular phases of its work. Men and women in business life, in professional occupations and people of leisure in different countries write asking for particulars regarding acquisitions, expeditions or discoveries reported in the press.

Of even greater significance as an indication of this intelligent and inquiring interest is the occasional reference to the Museum's work in various journals published by important financial institutions or business enterprises. The field of research in Archaeology is naturally closed to all except a relatively small number of scholars, but it is evident that their labours come more and more within the knowledge and active interest of men who, in their daily cares, are concerned with the living minute rather than with dead antiquity. We have noticed in particular an address by Mr. William A. Law, President of the Penn Mutual Life Insurance Company, at the Forty-third Annual Meeting of the Penn Mutual Agency Association at White Sulphur Springs on May 25, 1926. After paying a tribute to the Museum and to the work of its President, Mr. Charles C. Harrison and his friends who are so generously providing the means for conducting its activities, Mr. Law concluded with the following reference to the Joint Expedition of the University Museum and the British Museum at Ur of the Chaldees in Mesopotamia.

"During the last four years the work has centered upon two temples, one dedicated to the Moon God in the city of Ur, and the other to the Goddess of Creation or Production, about four miles away. Alongside the temple of the Moon God was the Ziggurat, a great tower-like structure approximately 300 feet high with a square base, each story set back just as the types of new buildings in New York are required to be constructed by the zoning laws. These successive stories were built of brick, often of different color and size, many of them exactly twelve inches square and three inches thick. Each brick bears a stamp showing that it met the Royal requirements, somewhat like but more elaborate than the hall-mark on a piece of silverware.

"The oldest walls were built before 4300 B. C., or more than 6300 years ago. There was no stone building material available to Ur, but there are many inscriptions on carved stone door sockets, on clay cones and on brick tablets, showing the dates of construction, the religious zeal of the reigning monarch and the habits and activities of the people. The Sumerians were a highly civilized people; they cultivated the fields, they had flocks and herds, ships and tools. They wove woolen goods, they worked in metals, even using copper wire and gold, they veneered doors, altars, sculpture, and columns with precious metals. They made jewelry of gold and of gems, and wrought weapons and utensils of metal. They created exquisite designs of mosaic, and of clay, and they knew enough of astronomy and mathematics to build the Ziggurat, on which the high altar was placed, with the corners of the Ziggurat base pointing exactly to the four cardinal points of the compass, and its grand stairways had each exactly 100 steps.

"Many old cities are located at the important junction of two rivers, such as New York, Philadelphia and Charleston. Ur was at the junction of the Euphrates and the Tigris near the Persian Gulf, trading largely with Egypt. Its citizens cultivated the fertile alluvial valleys of those rivers, and as the forests were filled the soil finally washed down, and, as in the lower reaches of the Mississippi River, silt filled the harbor and destroyed its commercial value. The Babylonians and the Elamites attacked and destroyed Ur more than once, pillaging its wealth and wrecking its temple, taking away its golden and jeweled gods. Hundreds of years later it was rebuilt, only to sink finally into oblivion for centuries and to be covered by the shifting sands of the desert.

"As Kipling says—

Cities and thrones and powers
Stand in Time's eye
No longer than the flowers
Which daily die.
And as fresh buds put forth
To glad new men,
Out of the spent and unconsidered earth
The cities rise again.

"Centuries slowly elapsed and those staunchly built walls of brick stood fast, unaffected by change of weather or by the passing of a great city.

"Finally they were unearthed, and there they stand today erect and as strong as 6300 years ago, a monument to the patience, skill and intelligence of an almost forgotten race."

At about the same time that this address was printed in the *News Letter* issued monthly by the above mentioned Company, the leading article in *The Girard Letter*, the monthly bulletin issued by the Girard Trust Company, was devoted to the archaeological researches conducted by the Museum.

Such an interest as that manifested in the two instances above referred to, shows that modern archaeology appeals not to scholars only, but also to the members of societies and institutions whose main interests lie in totally different fields of endeavor. It is odd but gratifying to know that archaeology finds a place in the bulletins of banking and insurance corporations as well as in the journals of learned societies. We may assume that it is not without good reason that thoughtful people, occupied with the affairs of today, should be deeply impressed by the lessons of a remote past. It illustrates at least the essential continuity of things human.

THE DOCENT SERVICE

On each weekday the Docents are at the service of visitors and have the duty and the privilege of accompanying them through the exhibition rooms and explaining the collections. This attendance is entirely informal and is the expression of a wish on the part of the Museum Management to enable visitors to avail themselves at will of all possible means to make a visit to the Museum an agreeable and profitable experience and to ensure satisfaction on their part. Observation has proved that personal contact between visitors and those who live with the collections and are accustomed to interpret them in an interesting way makes a visit to the Museum more enjoyable. While some visitors may not need this assistance and many may prefer to stroll through the galleries alone, it is true in general that a little help from some one conversant with the exhibits enables the visitor to carry away a more lasting impression and a more satisfied frame of mind. This service is freely at the disposal of all visitors by application at the Information Desk in the entrance.

WHAT IS A DOCENT?

By Mrs. Loring Dam

THE idea of a Museum as a place for frequent and leisurely hours of æsthetic entertainment seems to be strange to the mind of the average American.

Frequently when I have asked my friends whether they would like me to show them our collections, they have said, "Oh, but I've *been* there!" Most of us go once the rounds of public exhibitions in a cursory way, methodically checking them off as "done" after one visit, or the Museum is regarded either as one of the sights of the city for the instruction and admiration of out-of-town visitors, or as a place of use only to art students, historians and archæologists.

I happened to be standing just inside the entrance to the Louvre one day last July, and had an opportunity of studying a crowd of tourists whose guide was informing them that they had twenty minutes in which to see the collections in that great Museum. Their complacency was not affected by an announcement and a situation that struck me as exceedingly ludicrous.

The incident startled me into speculation and, being everywhere Museum bent, I began studying the visitors here and there as well as the collections. It was an interesting business.

The British seem to take that same thorough and solemn possession of their public collections that they do of their parks and squares. I followed groups with a lecturer about the British Museum, wondering how Englishmen of every apparent walk of life came to be so interested in the designs on Cretan vases. I talked to one group and slyly dropped the question into the midst of our conversation. "Oh, we're (note the pronoun) excavating in Crete, you know, and one likes to be up on what's been discovered." I stood in the Lower Egyptian Galleries where were strolling about half a dozen men with their sons, great pals, some nearer six, some perhaps sixteen, and overheard a boy, certainly not over ten years of age, say, "now look here, Dad, is this a reproduction or an original?" They were not sightseeing, they were studying, with the same spontaneous enthusiasm they might take to a cricket match.

The average Englishman takes it for granted that he should be familiar with the art of all the world, and its history, too, for does not his empire stretch around the globe? It has a definite and practical significance for him.

The French seem less earnest, less proprietary about their Museums, one does not see so many of them in the galleries in France, but I talked to none who did not know the art of his city surprisingly well. They must acquire their knowledge intuitively, like their taste, with an insouciance that belies its thoroughness.

But the Italians go to their galleries as they go to church, with a childlike and unaffected reverence. The galleries are often crowded, but never disturbed, never noisy. They go with pride and comprehension to contemplate the wealth of Italy's contribution to art. I think the Italian is the Museum visitor par excellence; he combines the proprietary pride of the Englishman with the æsthetic sensitiveness of the Frenchman—and every picture, every marble one looks upon seems a living part of the mental content of the Italians we meet in the galleries, by whose courtesy, one feels, we are graciously permitted to enter the house of Italy, as we express in so doing an appreciation of her taste.

My conclusion was that the European does not merely visit his museums; he *uses* them as a part of his inheritance, they satisfy his tastes, and his emotional life. On a Sunday morning the modest Italian calls, with a friend or two, upon Raffael or Botticelli, with the same respectful cordiality he would show in entering the Salon to which he has not the entrée, and he goes away with as much enrichment of mind and spirit as those who converse with living celebrities. He is in sympathy with the greatest artists, and fortunate indeed is the foreign visitor whom he meets by chance in the gallery, and introduces into his world.

We, on the other hand, though we know the works of art from all the world in our Museums are beautiful and wonderful, that we have wealth and can buy them, that we can fill our buildings with the best each country and nation has to offer—do we really possess them?

Material possession is very different from spiritual, and dry as a mummy in comparison. In our free Museums the visitor may go where he pleases and look where he pleases, but to meet these select Chinese ladies from the court of T'ai-tsung or Kublai Khan, and these quiet Greek goddesses and stern Sumerian kings who graciously

have taken up their residence here, one must be properly presented. One must have the advantages of travel, and an acquaintance with their kindred in other cities of the world, or one must have an introduction from the court.

And this is where the docents serve. By living day by day with these royal visitors from the past we learn to know a little of their individualities, their culture and their tastes; and being, as it were, servants in the house, it has become our privilege and our pleasure to be permitted to present to them the visitors who want to become personally acquainted.

"What is a docent?" is asked us a dozen times a week. A docent is not a lecturer, not a guide, not a teacher, but one who shows. We are here to show the visitor not what is in the cases, but all the many things that are in the Museum, not visible, around, above, behind the cases, the things not obvious, not selfevident, that one discovers only by living daily with the treasures of the Museum, and which make these relics of the past vital, living, entertaining components of the life of today.

Many visitors who ask for Docent service come with a definite objective. They are teachers, and want to enrich their minds, or they are collectors and come to study our collections the better to understand their own. Others have travelled and have learned abroad to appreciate the importance of Museums. Occasionally we have the pleasure to receive one of those wise persons who prepare for travel by study of the foreign art so near at hand that it is usually overlooked through its proximity. Frequently people ask me what books to read before starting on a trip to the Old World, and my answer is always from my own experience, an hour spent in a Museum in intelligent study is a better preparation for the art of the Old World than all the books in the libraries.

And the visitors we like best are those who come, often with no definite objective, who drop in upon us for an hour's leisure in the spirit of adventure, with curiosity and with a challenge to our resourcefulness. That is what makes our own days in the Museum a constant adventure.

LECTURES

The following courses of lectures will be given in the Auditorium of the Museum on Saturday and Sunday afternoons during the months of November and December.

Members' Course

Saturday Afternoons at 3 o'Clock

November 6, Petra, The Mystery City of the Arabian Desert, by Mr. Joseph Wood.

November 13, Historical Java and Bali, by Mr. Adriaan J. Barnouw.

November 20, The Art of China, by Mr. Laurence Binyon.

November 27, Through Wildest Africa, by Mr. Ratcliffe Holmes.

December 4, The Rockies of Canada from End to End, by Dr. J. Monroe Thorington.

December 11, The Excavations at Ur of the Chaldees, by Dr. Leon Legrain.

December 18, Through India and Kashmir, by Mr. Barnum Brown.

Public Lectures

Sunday Afternoons at 3.30 o'Clock

November 7, The Great Palace of Assurnazirpal at Nimroud, by Mrs. Loring Dam.

November 14, The Temples of Olympia, by Miss Elizabeth G. Creaghead.

November 21, Buried Treasures of the Incas, by Mrs. Walter Nowak.

November 28, The Gods of the Egyptians, by Mrs. Loring Dam.

December 5, Bethshean, the Stronghold of the Philistines, by Miss Elizabeth G. Creaghead.

December 12, The Royal Palace of Merenptah, King of Egypt, by Mrs. Walter Nowak.

December 19, The Egyptian Book of the Dead, by Mrs. Loring Dam.

GALLERY TALKS

The Docents will give Talks in the Galleries of the Museum on Tuesday afternoons at 3.30 o'clock during the months of November and December.

November 9, In the Babylonian Galleries, by Mrs. Loring Dam.
November 16, In the South American Galleries, by Mrs. Walter Nowak.
November 23, In the Mediterranean Galleries, by Miss Elizabeth G. Creaghead.
November 30, In the Egyptian Galleries, by Mrs. Loring Dam.
December 7, In the African Galleries, by Mrs. Walter Nowak.
December 14, In the Chinese Galleries, by Miss Elizabeth G. Creaghead.
December 21, In the Egyptian Galleries, by Mrs. Loring Dam.

SCHOOL LECTURES.

The Department of Education of the Museum has arranged the following courses of lectures for the Elementary Schools of the City for Wednesday afternoons at 2.30 o'clock and for the High Schools for Tuesday afternoons at 3.30 o'clock.

Program for Elementary Schools

September 22, The Crusades.
September 29, Greek Games.
October 20, Roman Life.
October 27, A Trip to China and Japan.
November 10, The Great World of Africa.
November 17, An American Indian.

Program for High Schools

October 5, Egypt and Assyria.
November 2, Greek Athletics.
December 7, Influence of the Crusades on Mediaeval Life.
December 14, Rome in the Time of Caesar and Cicero.

FORM OF BEQUEST

I give and bequeath to the Trustees of the University of Pennsylvania the sum of .....dollars, in trust for the uses of the University Museum. (Here, if desired, specify in detail the purposes.)

SPECIAL NOTICE

In order that The University Museum may give appropriate recognition to the substantial gifts which have been already received, and which will hereafter be donated or bequeathed for the development of its resources and the extension of its usefulness, the Board of Managers have adopted the following classification for contributors and members, and have resolved that the names of the donors of aggregate sums of $25,000 and upwards, in cash, securities, or property shall be inscribed upon a suitable tablet or tablets, to be properly displayed in the Museum.

There shall be five classes of Contributors designated as follows:

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Associate Patrons,	" " " " " "	5,000
Fellows	" " " " " "	1,000

There shall be four classes of Members designated as follows:

Life Members,	who shall contribute	$500
Contributing Members,	" " "	100 annually
Sustaining Members,	" " "	25 "
Annual Members,	" " "	10 "

Contributors and Members are entitled to the following privileges: admission to the Museum at all reasonable times; invitations to receptions given by the Board of Managers at the Museum; invitations and reserved seats for lectures; the MUSEUM JOURNAL; copies of all guides and handbooks published by the Museum and free use of the Library.

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ANCIENT CHINESE MUSICAL INSTRUMENTS

As Depicted on Some of the Early Monuments in the Museum

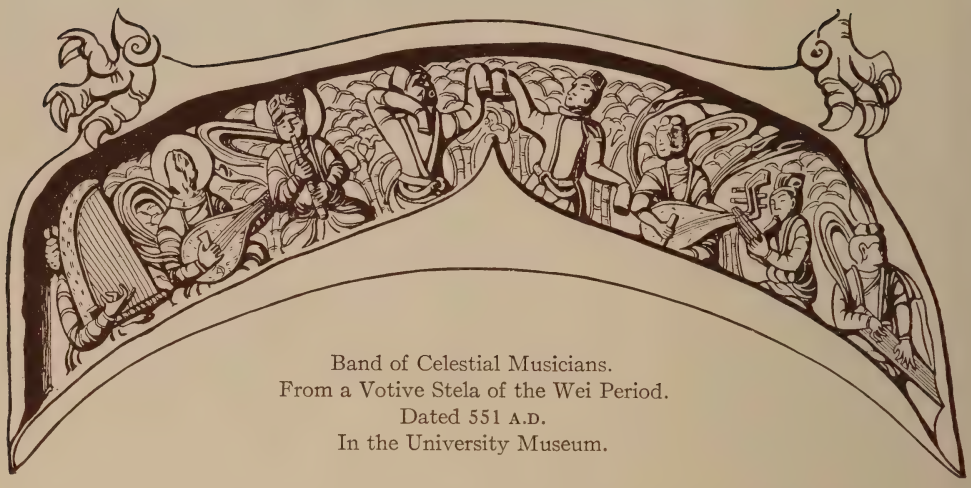
By Helen E. Fernald

Illustrations by the Author

AMONG the Chinese collections of the University Museum there are a number of figures representing musicians with their instruments in their hands. Some of these are in bas relief carved on the stone sculptures, notably the Wei votive stelae, where bands of celestial music makers appear above the niches. Others are the T'ang clay mortuary figurines already described in previous numbers of the Journal. There are later examples also, occurring on porcelains, on textiles, and on the Ming coromandal screen. A study of the instruments depicted, especially those on the earlier monuments, brings up a number of interesting points about their origin and use and about Chinese ideas of music in general.

Music was of great antiquity in China. According to tradition it was invented by Fu-hsi (2953 B.C.), first of the Five Divine Rulers. He was said to have introduced the lute and the lyre.[1] Nü Wa, mythical female sovereign who succeeded Fu-hsi, has been credited with the invention of the shêng or Chinese mouth organ. Legends cluster around the name of Huang Ti, the Yellow Emperor, who ruled about 2698 B.C. He is said to have encouraged the practice of music, teaching that it was in accordance with the rules of propriety and made the people happier and better. To him is attributed the honor of bringing order out of chaos by inventing the lüs, a

[1] European books have translated it "lute and lyre." The probability is that the characters are ch'in and sê, but I have not been able to verify this by reference to the original Chinese text. The ch'in and sê were types of psaltery, not lutes or lyres.



Band of Celestial Musicians.
From a Votive Stela of the Wei Period.
Dated 551 A.D.
In the University Museum.

series of pitch pipes by which all other instruments were regulated. The legend goes that he sent one of his ministers to Ta-hsia, a far distant place beyond the K'unlun mountains (probably Bactria), to obtain bamboos of uniform thickness from which to make the lüs.[1] However, it was to the Emperor Shun (2255 B.C.) that the Chinese looked back with greatest veneration as the founder of their philosophy of music. Shun was himself a musician and composed the piece called Ta Shao,[2] the sweet strains of which so impressed Confucius sixteen hundred years later that for three months he thought of nothing else.[3] Shun is also said to have been the inventor of the pan pipes, p'ai hsiao, a development of the lüs. These legends may be the pure fabrication of later times made in the effort to glorify the early ages and hold them up as examples for future generations to follow. They are not mentioned in the earliest literature, the Classics,[4] although Shun, to be sure, is there represented as a singer and composer, having amazing ideas as to the use of music in government and appointing a Director of Music who instructed the noble

[1] Van Aalst, Chinese Music. Shanghai, 1884, p. 6.

[2] Annals of the Bamboo Books, Pt. II, Chap. II, which Legge translates, "In his first year . . . when he came to the throne he dwelt in K'e and made the music called Ta Shaou." See Legge's Translation of the Chinese Classics, Vol. III, Pt. I, p. 115 of the prolegomena.

[3] The literal translation is, "For three months he did not know the taste of flesh. 'I did not think,' he said, 'that music could have been made so excellent as this.'" Analects, Book VII, Chap. XIII, Legge's Translation of the Chinese Classics, Vol. I, p. 63.

[4] The "Five Classics" are The *I Ching*, Book of Changes; the *Shu Ching*, Book of History; the *Shih Ching*, Book of Odes; the *Li Chi*, Record of Rites; the *Ch'un Ch'iu*, Spring and Autumn Annals. The last is the only one actually written by Confucius, the others are compilations and collections of older documents which left the finishing hand of Confucius some in their original state, others probably somewhat changed. The Li Chi as we have it now includes much that was added in the 1st century B.C.

youth and gave concerts at the court.[1] Whether the historical accuracy of those parts of the classics which deal with such remote periods as the era of Shun is to be trusted is a question. It is generally agreed, however, that in the case of the poetry we have not only the oldest texts but those the least tampered with. The Book of Odes is really an anthology of verse comprising the songs and ballads of the various states. Some of the odes were written as early as Shang, 1766–1122 B.C., a great many are of early Chou, 1122–770 B.C. the latest belonging to about 585 B.C. Confucius, 551–497 B.C., first gathered and edited these poems, but scholars believe now that he did not alter the texts. Thus the internal evidence of this poetry is of the first rank. The references in the Odes leave us in no doubt as to the importance of music in the life of ancient China. The great antiquity of certain songs, musical instruments, and theories of music stands revealed, whoever may have been later credited with the invention of them.

It has been declared that the ancient music of China was hopelessly lost at the time of the Burning of the Books, 212 B.C. However, we know the names of many of the most famous of the songs and a number have been identified among the poems of the Book of Odes so that the words of those have survived. One of the later odes, a poem assigned to the time of King Yu, c. 775 B.C., mentions two songs, or groups of songs, that must have been well known then in the early 8th century B.C. The last verse is translated as follows:

> "K'in, k'in the bells peal on
> And the lutes in the concert we hear.
> Deep breathes the organ tone
> Sounding stones join their notes rich and clear
> The while through the vessel there ring
> The Ya and the Nan which they sing
> And the dancers with flutes now appear."[2]

The Nan, it seems, is no other than that collection of the odes of Chou-nan and Chao-nan which comprises the first of part I of the Book of Odes, while the Ya was probably made up of the older poems of parts II and III, one section of which is still called the Ya. Other apparently famous songs mentioned in the early literature

[1] Shu Ching, Pt. II, Book I, Chap. V, No. 24, and Pt. II, Book IV, Chap. II, No. 9. See Legge's Trans. of the C. C., Vol. III, Pt. I, pp. 47, 87.

[2] Shih Ching, Pt. II, Book VI, Ode IV. See Legge's Metrical Translation of "The She King," London, 1876, p. 251. The characters which he translates as lutes are "ch'in" and "sê."

are the Yung,[1] the Wu and the Shao.[2] The Ta Shao we have already spoken of as the music composed by the Emperor Shun. It was evidently performed with the accompaniment of dancers as in the case of the Ya and the Nan, for Confucius says in the Analects, "Let the music be the Shao with its pantomimes."[3] The Li Chi says in the chapter on music (which is a very ancient document incorporated into the book) that "In antiquity the Emperor Shun made a ch'in with five strings of silk for singing the ode to the south wind."[4] That the tunes of some of these songs still survive, as is claimed by two tune books published in the 16th century, is quite possible. Books can be burned and words forgotten but ancient and popular tunes are not so easily erased from a people's mind. Though the books on music were destroyed by Shih Huang Ti, the chances are that the songs and melodies lived on through the period of suppression. The claims of the 16th century tune books may be true in at least some cases. What tunes have been lost have been lost through gradual disuse rather than any sudden wholesale destruction. Once forgotten, an ancient tune could not be revived because it had never been recorded by a proper system of notation. (The same reason why the tunes of Greece, Egypt, and mediaeval Europe have been lost.) The Kung Cheh system of notation came into popular use only in the Sung dynasty.[5]

In the Odes we have a picture of a China emerging from the mists of antiquity already endowed with a rich heritage of national ballads and popular songs which are evidently accompanied by instruments that are by no means primitive. Music was not only the spontaneous expression of the common people but an elegant accomplishment that was praised in Emperors. One of the earliest of the poems in the Shih Ching, a sacrificial ode of Shang called the *Na* and written at least before 1122 B.C., shows that music had a most prominent place in the sacrificial rites and incidentally gives us a picture of an orchestra highly organized. Five different musical instruments are mentioned which must be among the most ancient in China. Four of them are common to most ancient civilizations but the use of musical stones is unique.

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[1] Analects, Book III, Chap. II. Legge's Trans. of the C. C., Vol. I, p. 19.

[2] Analects, Book III, Chap. XXV. Ibid., p. 28.

[3] Analects, Book XV, Chap. X. Ibid., p. 162.

[4] Li Chi, Chap. XVI (the Lo Chi). See M. Callery's "Li-Ki," French translation, 1853, p. 91. Many other songs also are named in this chapter.

[5] Mrs. Richard, A Paper on Chinese Music, p. 6.

"O grand! The drums, both large and for the hand,
Complete in number, here in order stand.
Their tones, though loud, harmoniously are blent,
And rise to greet our ancestor's descent.

. . . . . .

. . Deep are the sounds the drums emit,
And now we hear the flutes, which shrilly fit
Into the diapason:—concord great,
Which the sonorous gem doth regulate!
Majestic is our king of T'ang's great line,
Whose instruments such qualities combine.
Large bells we hear, which with the drums have place,
While in the court the dancers move with grace."[1]

Therefore in the twelfth century B.C., or earlier, the Chinese had flutes, two kinds of drums, bells and musical stones, and had a definite orchestral arrangement for them. Another poem of slightly later date, between 1114 and 1076 B.C., mentions several other instruments. The literal translation of the poem is rather quaint, so I give it here.

"There are the blind musicians; there are the blind musicians;
In the court of (the temple of) Chow.
There are the (music frames) with their face boards and posts,
The high tooth edge (of the former) and the feathers stuck (in the latter);
With the drums, large (t'ien) and small (ying), suspended from them;
And the hand drums (t'ao ku) and sounding stones (ch'ing) the chu and the yu.
These being all complete, the music is struck up.
The pan-pipe (hsiao) and the double flute (kuan) begin at the same time.
Harmoniously blend their sounds;
In solemn unison they give forth their notes.
Our ancestors will give ear;
Our visitors will be there;—
Long to witness the complete performance."[2]

The t'ien was a huge drum; the character really means "field." Compared with it the ying-ku was small, about the size and shape of a flour barrel. We are interested in the ying-ku because it appears on so many of the Han bas reliefs. The t'ao-ku was a small hand drum twirled on a handle so as to make balls on the ends of strings strike against the heads. Ku by itself means merely large drum. The hsiao, or Pan pipes, was a set of tubes of different lengths tied

[1] Shih Ching, Pt. IV, Book III, Ode I. Legge's Metrical Translation, p. 385.

[2] Shih Ching, Pt. IV, Book I, [ii], Ode V, Legge's Trans. of the C. C., Vol. IV, Pt. II, p. 587. I have taken the liberty of inserting the Chinese names of the instruments.

together and giving notes corresponding to the lüs. It was used only in ritual music. The same was true of the chu and the yu, two peculiar instruments which gave the signals for starting and stopping. The chu was a square box with a hammer inside which was struck against the interior by an operator who reached through a hole in the side. The yu was a wooden tiger with teeth along the ridge of its back, down which the attendant drew a stick rapidly to make a rasping noise.

For the ceremonial music there were professional musicians, blind men in many cases evidently, as was true in other countries, such as ancient Egypt. Professionals would also seem to have been employed upon festive occasions such as that described in the poem which contains the reference to the singing of the Ya and the Nan. But that music was a part of the education of every noble youth the Book of History certainly gives us to understand, and the Odes bear out the impression that many amateur musicians could play the ch'in or the sê or the shêng[1] and that these instruments were as popular as our guitars and ukuleles. One of the Odes says

> "Why not at the feast your sê gaily play
> To add to your joy and lengthen the day?"[2]

Thus we find again and again, in the Odes, in the Book of History, in the music chapter of the Li Chi, evidence that at the time the Classics were written (during the Shang and Chou dynasties, from before 1122 B.C. up to the middle of the sixth century B.C.) there were many popular as well as ritual songs and many instruments in use which were even then considered very ancient. And this brings us to remark upon a phenomenon that does not appear to have occurred anywhere else in the world save in China, the spectacle of a people rising out of barbarism into civilization who were so intensely interested in the process of their own intellectual evolution that they kept voluminous records of every step. It is seldom that a child is so interested in the development of his own mind that he watches and records its growth himself. Few babies keep their own baby books. Neither has any nation of antiquity so far as we know, except China, described itself, its geography, its government, its institutions, its rites, its own manners and customs

[1] Shih Ching, Pt. I, Bk. VI, Ode III, Legge's Trans. of the C. C., Vol. IV, Pt. I, p. 113.

[2] Shih Ching, Pt. I, Bk. X, Ode II, Legge's Metrical Translation, p. 148. The word sê has been substituted for the translator's term lute.

and knowledge. Usually our information on these subjects has to be gained indirectly from other sources, from religious texts, from paintings and sculptures and objects from tombs. In the field of music, for instance, what we know about ancient musical instruments of the Egyptians we have had to learn from paintings on the walls of tombs, mention in the religious texts in the tombs, and fragments of originals found occasionally. There are no ancient Egyptian essays on the subject of music; we have no means of finding out what the Egyptians thought about music. The same is true of other nations. Among the Babylonian clay tablets are hymns to Ishtar, and to Nin-ib, and bas reliefs of the Assyrians show harpists and other musicians, so that we know that those nations had music but we have few clues to what it was like or to whether there were other instruments, of which no pictures have been discovered. Even in the case of the Greeks, the lyre is familiar to us only because so frequently represented in sculptures and vase paintings. Many of the other musical instruments mentioned in Greek literature are known to us by name only, even the nature of them being a matter of conjecture. The same is true even of the middle ages in Europe. We must learn what we can from manuscript illuminations such as one showing David playing an 11th century harp,[1] or from capitals and choir stalls carved with figures of angels performing on harps and lutes of mediaeval type.[2] In China one has similar material plus Chinese treatises on the subject, literature that begins with the music chapter of the Li Chi already mentioned, and includes a section in each of the Twenty four Dynastic Histories, besides numerous books and essays on music. From the early days of the Chou dynasty then, the 11th century B.C., until the time of the Republic, 1912 A.D., the Chinese have been writing about their music, its place in ceremonies and rites, its uses in forming character, its psychological influence on the minds of listeners, the symbolism of the scale, and describing the various instruments in use. Much of the earlier literature has been lost beyond recall, and little of what there is has yet been translated into any European tongue. What is available is often vague and anything but scientific, but it does corroborate or explain much that would otherwise be an eternal enigma to us, and above all it reveals the reason why Chinese music never progressed to the glorious heights which its early and brilliant beginnings had seemed to

[1] Engel, Musical Instruments, Handbook of the South Kensington Museum, p. 89.

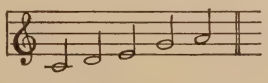
[2] Kelley, Musical Instruments, p. 67.

promise. It was largely the symbolic and philosophic meanings attached to music in the early days of China that restricted its development and kept it unprogressingly true to its ancient traditions. As a matter of fact, it was not only a scholarly interest in the details of his civilization that was at the root of the essays of the ancient Chinese author, but also the very definite aim of extolling the customs and accomplishments as well as the virtues of the Ancestors, and so preaching the doctrine of ultra conservatism which meant "no change from the ancient, and therefore best, order of things," a feature of ancestor worship which accounts for the innate resistance of the Chinese to everything in the line of an innovation.

In the earliest days that we know of in China music had already become bound up with symbolism. The Shu Ching attributes to the Emperor Shun many statements that prove at least that certain philosophical theories were well established by the early Chou dynasty. For instance, he is quoted as saying, "K'uei, I appoint you to be Director of Music, and to teach our sons, so that the straightforward may yet be mild, the gentle may yet be dignified, the strong not tyrannical, and the impetuous not arrogant. Poetry is the expression of earnest thought, singing is the prolonged utterance of that expression. The notes accompany that utterance, and they are harmonized themselves by the pitch pipes. In this way the eight different kinds of instruments can all be adjusted so that one shall not take from or interfere with another, and spirits and men will thereby be brought into harmony."[1] The reason why spirits and men would be brought into harmony with each other by the tuning of the various instruments to the lüs was this: Heaven and Earth, the Chinese said, were in perfect harmony.[2] The number 3 was the symbol of Heaven, 2 of Earth. If two sounds therefore were in ratio of 3 to 2 their harmony would be as perfect as that of Heaven and Earth. Thus the pitch pipes, or lüs, were cut so that the length of the second tube was two thirds of the first, and the third tube was two thirds of the second (only it was doubled to give the octave lower), and so on. Thus a series of perfect fifths was obtained. Any two notes given by tubes whose lengths were in such relative proportions must in the nature of things harmonize as did Heaven and Earth, and instruments tuned to them would produce music which could not but bring Heavenly spirits and Earthly men

[1] Shu Ching, Pt. II, Bk. I, Chap. V, No. 24, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 47.
[2] Li Chi, Chap. XVI, p. 90 of Callery's translation.

together in harmony. There seem to have been only six tubes at first and only five of them were used. Shun is reported as saying, in the Shu Ching, "I wish to hear the six pitch pipes, the five notes determined by them, and the eight kinds of musical instruments regulated again by these."[1] We know that the first five lüs gave notes corresponding to our C, G, D, A, E, except that D, A, and E were not quite true to our notes, which belong to a tempered scale.[2] However, generally speaking, the early five note scale of the Chinese established by the lüs was very nearly this:



Shun used this scale even in his governing. His ideas (if they really are as early as his time) are ingenious if not wholly practical. He continues the discourse quoted above: "Examining thereby the virtues and defects of my government according as the odes that go from the court and the ballads that come in from the people are ordered by those 5 notes." Whether his viceroys were governing poorly or well, he believed he could tell from the tone of the music produced during their rule and it was firmly believed that to teach the people the odes which had been carefully set to music regulated by the lüs was to make them peaceful and happy, amenable to rule. The chapter on music in the Li Chi observes, "Every musical air has its source in the heart of man," when he is angry and sullen his songs are rude and violent, when he is in love they are soft and full of tenderness, but many of these feelings which are expressed in musical airs can also be induced in men by musical airs; therefore the emperors of ancient times taught men ceremonies as a means of directing their wills, and instituted music for controlling their emotions and conduct, and thus they found the secret of ruling in peace. In times of peace, the Li Chi continues, when the tunes breathe calmness and joy, the government is good. In times of revolt, when the tunes breathe reproach and anger, the government is in disorder. This proves that between the nature of musical airs and the state of government there is an intimate relationship.[3] That Confucius firmly believed in this influence of music for evil

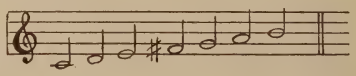
[1] Shu Ching, Pt. II, Bk. IV, Chap. I, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 81.

[2] Van Aalst explains, Chinese Music, p. 13, that the whole scale is really pitched a little higher than this, at least in the present day. Huang-chung, which he has called C for clearness, is more exactly our D.

[3] Li Chi, Chap. XVI. See Callery's translation.

or for good is seen in his remark about the Ta Shao and the Wu. "The Master said of the Shao that it was perfectly beautiful and also perfectly good. He said of the Wu that it was perfectly beautiful but not perfectly good."[1] Both were fine in melody but the Wu breathed a martial spirit that aroused men to violence.

The five notes of the ancient scale were compared to the five virtues, benevolence, righteousness, propriety, knowledge, and faith.[2] That was one reason why the use of music regulated by the lüs was supposed to transform the people. Sometime still in antiquity the number of tubes of the lüs was increased to twelve and a complicated system of philosophy grew up around them. They became involved in the yang and yin philosophy, the oldest in China, according to which everything in the universe belonged either to the yang or the yin principle, the yang being male energy, strong, positive, superior, the yin being female energy, weak, negative, dependent. Everything that happens is the result of the combination or interaction of these two principles. Six of the tubes of the lüs were considered yang and the other six yin. The twelve lüs were compared to the twelve signs of the zodiac, the twelve moons and the twelve hours. Huang-chung, "yellow cup," the first of the tubes and the basis upon which all the others were built, was furthermore used as a standard of length and capacity, being 9 inches (some say a foot) long and holding 1200 grains of millet.[3] Early in the Chou dynasty two more notes were added to the scale, nearly corresponding in tone to our F sharp and B.



These notes, according to a historian of the Yüan dynasty, were called the "seven beginnings" and were in Han times compared to Heaven, Earth, Man, and the Four Seasons.[4] It must be remembered that the notes of the scales indicated here give only an approximate idea of the Chinese notes. Their music cannot be recorded in terms of ours, for the relationships between the notes they use are different. Wherever we might start the scale in unison the rest of their notes would sound sharper or flatter than ours. "The intervals of the lüs have all been accurately measured, none is in tune with our

[1] Analects, Book III, Chap. XXV, Legge's Trans. of the C. C., Vol. I, p. 28..

[2] Shu Ching, Pt. II, Bk. IV, Chap. I, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 81, notes.

[3] Shu Ching, Pt. II, Bk. I, Chap. III, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 36, notes.

[4] Wu Ch'ing. See Legge's Trans. of the C. C., Vol. III, Pt. I, p. 81, notes.

western scale whether pure or tempered."[1] The only way for us to write Chinese music with scientific accuracy would be to indicate the number of vibrations per second for each note, or to use a staff whose lines and spaces would represent their intervals, not those we use. To the western ear many of the Chinese intervals seem discordant beyond endurance, because some notes seem too sharp, others too flat, "but to the Chinese this is no objection, their aim being to prove the irrefutable connection of their music with astronomy and nature."[2]

Doubtless in China music began, as among all primitive peoples, as a perfectly natural and spontaneous expression. As the Chinese say themselves, "Every musical air has its origin in the heart of man."[3] But enough has been said to show how very early it became tied by those philosophic theories and symbolic comparisons so dear to the hearts of the Chinese. They did not philosophize about their music but could almost be said to have built up a musical system to illustrate their philosophy, and thus made it impossible for music to develop except within a very narrow field of thought. The "Burning of the Books" in 212 B.C. destroyed philosophical writings on music, records of musical airs and the instruments themselves, but the philosophy and tunes were remembered and revived and instruments were soon reinvented exactly like the old. In Han times along the trade routes from Central Asia came instruments unknown before to the Chinese and the introduction of Buddhism brought with it new instruments, but they were soon adopted and made to fit into the old theories and symbolic meanings were attached to their different parts.[4] When the Mongols invaded China they brought with them a different scale in which F natural occurred instead of F sharp and during the Yuan dynasty both were used. Much confusion resulted and today the scale actually in use is the ancient pentatonic one, in which the two notes causing half tones in the seven note scale (F and B) exist only in theory. Besides, the five note scale fits the philosophy better, for are not the five notes like the five planets, Mercury, Jupiter, Saturn, Venus, Mars? Can they not be compared with the five points of the compass, north, east, center, west, south? They correspond to the five colours,

[1] Stanford and Forsyth, A History of Music, 1920.
[2] Van Aalst, Chinese Music, p. 23.
[3] Li Chi, Chap. XVI, where this statement is repeated many times.
[4] For instance, the P'i-p'a. The four strings and the Four Seasons.

black, violet, yellow, white, red, and the five elements, wood, water, earth, metal, and fire. They even have affinity with the five relationships; the note Kung (C) corresponds to the Emperor, Shang (D) to the minister, Chiao (E) to the people of the nation, Chih (G) to the affairs of state, and Yu (A) represents material objects![1]

This love of the Chinese for putting everything in numerical categories may be seen well illustrated in the Shu Ching. We are especially interested in the "eight kinds of musical instruments" mentioned so many times, literally the "eight sounds."[2] This refers to the material of which the instruments were made, metal, stone, silk, bamboo, gourd, earth, leather, and wood. In the concert given by K'uei described in the Shu Ching,[3] each kind is represented except earth, bells (metal), musical jades (stone), ch'ins and sês (silk), flutes (bamboo), the shêng (gourd), drums (leather), and the chu and yu (wood). Wu Ch'ing thinks the yu was at that time an earthen ocarina such as was later called "hsuan,"[4] a theory by which all eight kinds of instrument would be accounted for here. Chinese writers on music still classify the instruments according to the eight materials, which represent the Earth or Nature and correspond to the eight symbols, called pa-kua, of Fu-hsi, symbols made up of combinations of straight and broken lines representing the yang and yin principles. It is thus seen that the development of the instruments themselves and their use in the orchestra was so restricted by the symbolism in regard to their dimensions, number of strings, and material of which each detail must be made that as a result some of them are good examples of "arrested development," being practically identical today with their prototypes of four thousand years ago.

Of the instruments represented on the stelae and other objects in the University Museum, some are still in use in China as they were in the days of Chou, 1122–255 B.C. Others have today no counterpart. We are fortunate in having many aids to identification besides the Chinese writings on music. Most important are the rather recent discoveries of Sir Aurel Stein at Tun Huang, the Caves of the Thousand Buddhas, where a hoard of manuscripts and paintings was uncovered which had been sealed up since about the end

[1] Van Aalst, p. 17.

[2] Shu Ching, Pt. II, Bk. I, Chaps. IV and V; Pt. II, Bk. IV, Chap. I, Legge's Trans. of the C. C., Vol. III, Pt. I, pp. 41, 48, 81.

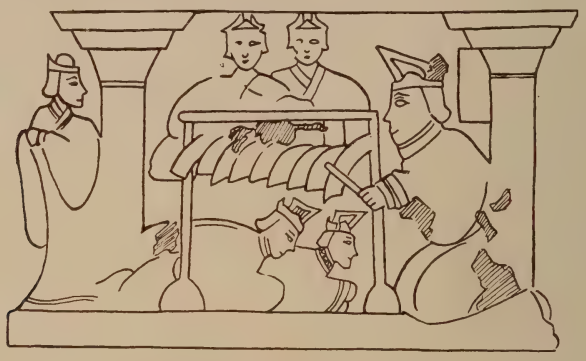
[3] Shu Ching, Pt. II, Bk. IV, Chap. II, No. 9, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 87.

[4] But the ocarina is called "hsuan" in the Li Chi.

of the T'ang dynasty. Many of the paintings, which are now in the British Museum, represent the Buddhist Paradises of Amitabha, Sakyamuni, or Bhaisajyaguri. In them all the Buddhas appear enthroned in the center surrounded by adoring Bodhisattvas, while before them dancers and musicians perform. The number of musicians varies from four to twelve; usually there are eight, four on each side. In many cases the instruments can be clearly made out. There are flutes, both transverse and vertical, ch'ins and sês, harps, castanets, drums, and cymbals. And there is always the Chinese mouth organ, the shêng. Frescoes analogous to these paintings are seen on the walls of the Tun Huang caves, but I have seen only M. Pelliot's plates of them, from which it is hard to make out any details of the instruments. Many of these paintings are dated, and belong to the same general period as the stelae and clay mortuary sculpture in this Museum. Then there are the precious instruments preserved in that most fascinating of museums, the Shosoin at Nara, Japan, established in 749 A.D. by order of the Emperor Shomu to contain all the contents of his palace. Among the personal belongings of this Japanese ruler of the middle eighth century were exquisite examples of a Chinese shêng, several ch'ins, and a number of p'i-p'as both of the four and of the five stringed type. In no other country in the world is there a collection of mediaeval musical instruments that can compare with this. Probably the only reason we do not find in the Shosoin examples of stone chimes, bell chimes, etc. is that they were used in ritual music only. The ch'in, p'i-p'a and shêng, being more popular instruments, as well as recognized marks of the gentleman of culture, were the ones which had found their way into the Emperor's palace.

The earliest known representations of musical instruments in China are to be found on the carved stone slabs from funeral chambers and vaults of the Han period, made accessible through the plates of Chavannes' "Mission Archéologique" and other works. On one of the slabs from the well known Wu tombs in Shantung province may be seen a stone chime pictured. The sonorous stone, or musical jade, has already been mentioned several times in quotations from the Shih Ching and Shu Ching, a fact which points to its very early origin. It is one of the instruments of greatest antiquity in China and peculiar to that country, moreover. There were single sonorous stones and there were sets or chimes. The "Na" mentions "the sonorous gem." It was a flat jade stone cut in the shape of a car-

penter's square, with one arm longer than the other, called the drum. It was pierced with a hole at the apex and a cord run through for suspension to a wooden frame. It was played by tapping it on the "drum" with a hammer, causing a clear ringing sound of definite tone. In the Shu Ching, K'uei speaks of two ways of striking the stones. "When the sounding stone is tapped or strongly struck."[1] Sometimes the single sonorous stones were carved in the shape of fantastic beasts, dragons, fish, or lions. The representation on this Wu slab shows the set, or stone chime, which, according to literature, consisted of sixteen musical stones hung in two rows in a frame.

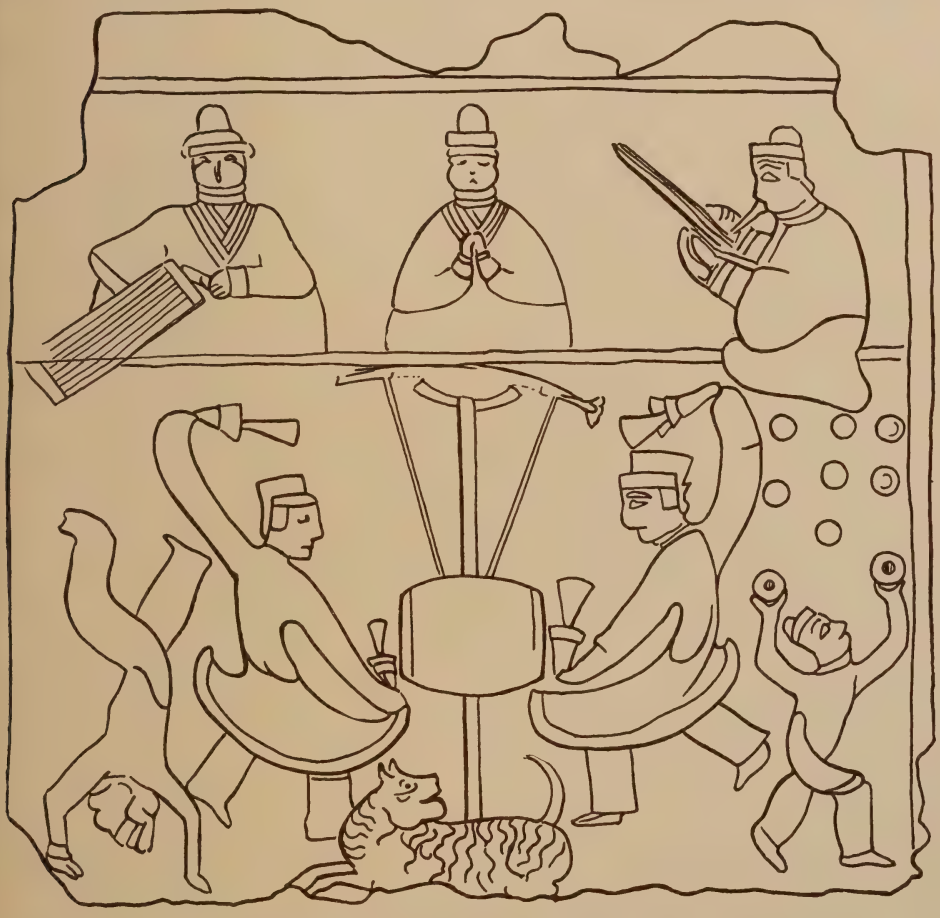


Confucius Playing the Stone Chime.
Scene on a Stone Slab from the Wu Tombs.
Han Period.
Chavannes, Mission, No. 143.

This shows only one row, of nine. The stones of a chime were supposed to be of the carpenter's square shape, all of the same size but varying in thickness to give the different notes of the lüs. Again, in this scene we see that the shape represented is not that of a carpenter's square but a single curved section of a circle. The stones are suspended from a very plain framework and the performer, at the right, is tapping them lightly with a hammer. The scene illustrated is that related in the Analects. "The Master was playing one day on a musical stone in Wei when a man, carrying a straw basket, passed the door of the house where Confucius was and said, 'His heart is full who so beats the musical stone.' "[2] Musical stones were often cut in the shape of bells. Such a flat bell dating from the Chou dynasty is in the Eumorfopoulos Collection.[3]

[1] Shu Ching, Pt. II, Bk. IV, Chap. II, 9, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 87.
[2] Analects, Bk. XIV, Chap. XLII, Legge's Trans. of the C. C., Vol. I, pp. 154–55.
[3] Pope-Hennessy, Early Chinese Jades, Plate 38.

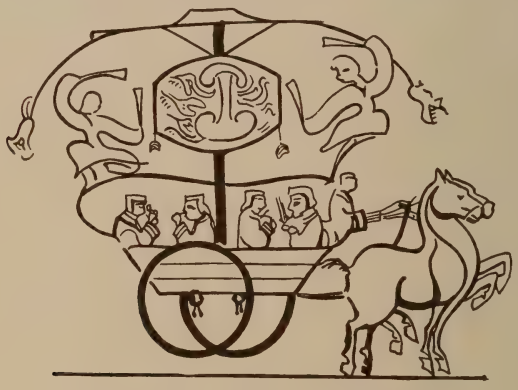
A number of Han slabs depict musicians, dancers, and jugglers according to a fairly definite scheme of arrangement. A very good example of such a relief is a slab from Chiao Ch'eng Ts'un in Shantung. Conspicuous in the center of the composition is a great



Ying-Ku Performance, with Ch'in and Shêng.
Stone Slab from Chiao Ch'êng Ts'un, Shantung.
Chavannes, Mission, No. 151.

"Ying-ku" or barrel drum suspended by two straps from a cross bar which rests on a pole. The pole appears to pass through the barrel of the drum and is supported on the back of a carved lion. On each side a man is applying the drum sticks vigorously, his arms swinging, his body fairly leaping in the air. On the right is a juggler, on the left a man walking on his hands. Above are three seated musicians, one playing the ch'in, another clapping his hands, and the third performing on the shêng. Other slabs show variations on this theme.

Nearly always there is the great "ying-ku" with its vehement performers. Chavannes illustrates five other slabs depicting it.[1] A Han relief in the Baron Von der Heydt Collection at The Hague repeats the scene,[2] and the slab illustrated in Dr. Laufer's "Chinese Grave Sculptures of the Han Dynasty," Plate VI, is doubtless another repetition. The clearest representation of the ying-ku is probably that of the slab from Hsiao T'ang Shan reproduced in Bushell's "Chinese Art,"[3] showing a band wagon of Han times, a large two horse chariot roofed over with a wide canopy. Four musicians sit under the canopy, with a driver in front, while on the roof is mounted a great "ying-ku" with a pair of drummers going through their wild gestures. Here again the heavy pole rising from the center of the chariot seems to pass through the barrel of the



Chariot with a Ying-Ku and Musicians.
Detail of Slab from Hsiao T'ang Shan.
Chavannes, Mission, No. 45.

drum. The ying-ku is ornamented with scroll forms, which lead us to believe that the barrel was of painted wood. The heads were doubtless covered with leather. Two small metal bells hang from the lower edge of the drum. From the framework above float out long ribbons or streamers with bells or tassels on the ends. The Von der Heydt slab and the one published by Dr. Laufer also show these streamers and in the last case they seem to be held by men standing a little distance away. Was the ying-ku sometimes made to revolve on the pole by means of these ribbons and is that why the drummers appear to be performing a wild dance before the drum?

[1] Chavannes, Mission, Nos. 149, 158, 160, 162, 1265.
[2] With, Bildwerke ost-u-sudasiens aus der Sammlung Yi Yuan, Plate I.
[3] Chavannes, Mission, No. 45. Bushell, Chinese Art, Vol. I, Fig. 9.

That the playing of the ying-ku was a spectacular performance we cannot doubt, especially when we see from a stone published by Father Volpert as well as from the Von der Heydt slab that the drummers were sometimes mounted on horseback.[1]

The ying-ku seems to have gone out of style after Han, at least it is no longer popular on the monuments. But the instruments played by the little seated musicians on these stones have lasted throughout the history of China and we shall refer to the Han slabs again as we consider the musical instruments represented on the Wei and T'ang monuments.

There are in the University Museum two fine votive stelae of the Wei dynasty. The one bears a date corresponding to 551 A.D.,[2] the other was set up during the reign of Wu Ping, about 575 A.D.[3] Over the main niche of the former is a row of six musicians and two dancers.[4] The instruments depicted are the ch'in, the shêng or reed mouth organ, the four stringed p'i-p'a, the vertical flute, the five stringed p'i-p'a, and the harp. On the other stela, that of Wu Ping, five tiny musicians are seated in the trees above the lowest niche or fly through the foliage as they play. The instruments they carry are the same as those just mentioned, with the exception of the ch'in. Among the T'ang grave figurines are the three charming seated girl musicians belonging to the set of Princess and dancers.[5] They play the shêng, the p'i-p'a and the harp. In another set of standing female figures are seen a harp player and a performer on the five stringed p'i-p'a.[6] A seated figure covered with the green and amber glazes of the period plays small cymbals. There is also a set of four male musicians represented with drum, clarionet, shêng and gong, but these belong to a considerably later time and shall be mentioned only briefly at the end of the article together with the Ming and Ch'ing representations on textiles, porcelains, and screen.

On the stela of 551 A.D., in the University Museum, the musician at the extreme right is playing a ch'in. The *Ch'in* 琴, almost always translated "lute," was actually a kind of psaltery. It was the instrument said to have been invented by Fu-hsi at the very

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[1] Anthropos, Vol. III, 1908, p. 14.

[2] Published in the MUSEUM JOURNAL, March, 1923.

[3] Published in the MUSEUM JOURNAL, December, 1924.

[4] See illustration on page 326 of this article.

[5] Published in the MUSEUM JOURNAL, December, 1924.

[6] These and the following ones mentioned have been published in the MUSEUM JOURNAL for March, 1926.

Ch'in Player.
From the Stela of 551 A.D.
In the University
Museum.

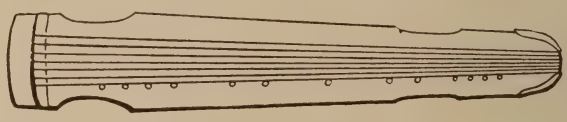
beginnings of Chinese history and we find the character over and over again in the pages of the classics, where it is usually associated with sê 瑟, a similar instrument of more strings. The earliest mention of it is probably that passage in the Book of History in which K'uei, the Director of Music under the Emperor Shun, describes a concert at the court, "When the ch'ins and sês are swept or gently touched to accompany the singing."[1] References to the ch'in occur often in the Book of Odes.

> "I have here admirable guests
> For whom are struck the ch'ins and sês.
> The ch'ins and sês are struck
> And our harmonious joy is long continued."[2]

and

> "The grove would yield ere long
> Abundant wood for ch'ins and sês
> To aid the voice of song."[3]

besides the quotation already given on page 327. The Li Chi mentions the ch'in and sê and gives Shun the honor of inventing the five stringed ch'in.[4] There is no doubt that it was an instrument known long before the beginnings of authentic history.



Modern Ch'in.

The ch'in had a sounding board 3.66 Chinese feet long and about 6.6 Chinese inches wide. (In our measurements it would be approximately 4 feet by 8 inches.) These numbers were divisible by 3 and thus were symbolic of Heaven, Earth, and Man. The top of the ch'in was slightly rounded to represent Heaven, the bottom, Earth, was flat with two round or oblong sounding holes. Five silk strings representing the five elements and giving the five notes of the early pentatonic scale were stretched the length of this board. The num-

[1] Shu Ching, Pt. II, Bk. IV, Chap. II, 9, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 87.

[2] Shih Ching, Pt. II, Bk. I, Ode I. A poem of the 12th century B.C. See Legge's Trans. of the C. C., Vol. IV, Pt. II, p. 247. Terms ch'ins and sês substituted for lutes.

[3] Shih Ching, Pt. I, Bk. IV, Ode VI, Legge's Metrical Translation, p. 97.

[4] See page 328.

ber of strings was later increased to seven. At the wider end the strings were held by nuts on the under side and carried through holes in the board to the upper surface. There they passed over a bridge and extended the length of the board, being carried over the narrow end and fastened on jade or wooden pegs below, by means of which they could be tightened. There were usually four small feet which raised the ch'in above the surface of the table upon which it might be placed when played, although early pictures often show it being held on the lap of a person seated on the floor. This position is seen on the figure from the stele of 551 A.D. and in the fragment of painting from Tun Huang illustrated on page 345. The wider end, where the bridge was, was placed under the right elbow with the instrument lying across the lap and the narrow end extending beyond

Scene on a Slab from the Wu Tombs, Shantung.
Flute, clapping, singing(?) ch'in player.
Chavannes, Mission, No. 117.

the left knee. Thirteen studs inlaid in the surface of the board were supposed to be made of gold from Li Shui but were often actually of mother of pearl. They indicated the position of the fingers when playing the notes of the scale. They represented the 12 moons and the intercalary moon. The strings were tuned as follows.

1st	2nd	3rd	4th	5th	6th	7th
C	D	E	G	A	C	D

The 6th and 7th were the octaves above 1st and 2nd. A special and very complicated system of notation had to be mastered by players on the ch'in. The directions are so difficult to learn that few persons can play this instrument. The strings are plucked with the fingers, sometimes beaten, sometimes pushed inward or outward. The fingering is most complicated. No wonder that the ch'in was considered the instrument of the educated classes. Laying claim to such extreme antiquity as would in itself demand veneration, surrounded by an atmosphere of mysterious symbolism which bound it with the occult arts, having a sweet poetic tone, and requiring a

high degree of intelligence and much leisure to master it, it was bound to stand for the acme of elegance, culture and refinement. It is represented on Chinese porcelains among the objects of a scholar, and often appears in paintings of sages and philosophers in landscapes. Gorgeous brocade bags or cases were made for the ch'ins. In the painting No. 21 in this Museum the philosopher walking along the path by the lake is followed by a servant carrying a ch'in in a case.

The earliest known representations of the ch'in appear on some of the Han stone slabs. A slab from the famous Wu Tombs pictures clearly a ch'in of five strings. (See Chavannes, Mission Archéologique, No. 117.) There are three round holes or discs at the bridge end, but what their function was we do not know. Probably they were

Detail of a Slab from the Wu Tombs, Shantung.
Three men on left: pan pipes, flute, singing.
Three women on right: ch'in, clapping, clapping.
Chavannes, Mission, No. 122.

merely for ornament. They appear again on the instrument depicted on another Wu Tomb bas relief (Chavannes No. 122). The scene is similar, but the ch'in certainly has seven strings. Ch'ins, or perhaps sês, appear on many of the stones from other funeral chambers or vaults of the period, but in some cases, such as Chavannes' No. 182, only the shape of the instrument is indicated. The position in which the ch'in is held in these Han reliefs is apparently different from that of the representations of later times, although this is not always the case, as may be seen from the group on the pillar of Nan Wu Yang. Here we see four musicians. One of the musicians plays a ch'in of five strings. The ch'in depicted on the stone from Chiao Ch'êng Ts'un has seven strings.[1] Of representations belonging to the Wei period the ch'in on the stela of 551 A.D. in the University Museum seems to have nine strings, but two of the lines may be meant to represent the thickness of the board or perhaps the artist was not careful to draw the correct number.

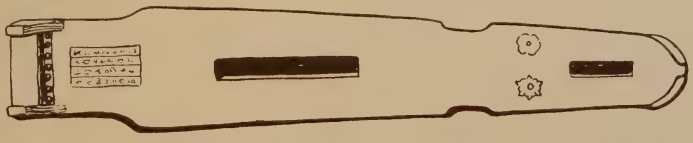
[1] Illustrated on page 339.

From the Pillar of Nan Wu Yang.
Flute, ch'in, clapping, shêng.
Chavannes, Mission, No. 156.

In the paintings from Tun Huang there is a ch'in or sê in practically every orchestra. In most cases it is impossible to make out the details, but a few of the fragments are clear enough for us to count the strings and examine the framework of the instrument. We reproduce here a drawing made to show a detail from a fragment of a large Paradise painting. Three members of the orchestra appear playing on the ch'in, harp, and p'i-p'a respectively. The ch'in is of elegant form, slender and of great refinement of line like a piece of Sheraton. The edge of the board appears to be of a dark

Detail of a Painting Found at Tun Huang.
Representing the Paradise of Amitabha.
T'ang Dynasty.
Ch'in, harp, p'i-p'a.
Stein, The Thousand Buddhas, Pl. XXX.

wood and is carried down at the corners into box feet. One can make out seven strings, but they do not seem to go over either end. Other plates in The Thousand Buddhas show ch'ins, however, whose strings do round over the end held furthest away.



Under side of a ch'in in the Shosoin showing sound holes, pegs and holes for the seven strings and the two large rosette pegs to which strings were fastened after passing around the narrow end of the board.

T'ang Dynasty.
Drawn from the Toyei Shuko.

None of these representations show the notches in the side which are so characteristic of the shape of the ch'in as we know it today, but the beautiful T'ang ch'in of the Shosoin at Nara has a notch on each side toward the narrow end like the modern ch'in shown. This example is priceless, not only because it is an exquisite piece of work in gold and silver inlay but also because it is the only really authentic example known of a T'ang ch'in. There is an inscription in Chinese on the under side just below the seven string pegs. On the coromandel screen in the University Museum are a number of instruments of the Ming Dynasty depicted. One of the scenes shows three ladies seated in a small room, one of them playing

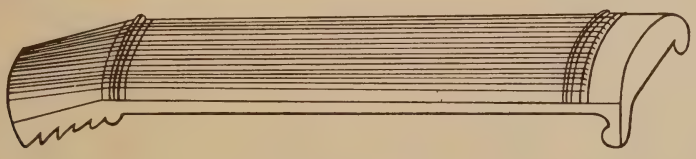
Lady Playing a Ch'in.
From the Ming Coromandel Screen.
In the University Museum.

a ch'in which rests on the table before her. This later ch'in has two notches or indentations in the outer side. The seven strings are indicated in white paint.

The numerous representations on the Han reliefs and in the T'ang paintings from Tun Huang (and the frescoes of the caves themselves) all point to a more popular use of the ch'in than prevailed in later days. The word ch'in meant to "prohibit," the ancient idea being that its sounds restrained and checked evil passions. But the term is otherwise singularly àpropos, for the difficulties which confront the beginner on the ch'in are such as to turn many from this to more easily mastered instruments. The expert performer was and is rare. The strings are not now tuned in accordance with the ancient order, but are G A C D E G A. Neither are the dimen-

sions adhered to as strictly as in the olden times. But no radical improvements can be made in an instrument so rigidly set in symbolism. During the late Empire the ch'in was heard only at court ceremonies, and in connection with the Confucian rites in which six of these instruments take part. It is almost never played now.

The *Sê* 瑟 was an instrument very much like the ch'in, the main difference being the number of strings. It also was reputed to be of great antiquity and is almost always mentioned in the classics together with the ch'in. Dr. Legge usually translates the two characters "lutes, large and small,"[1] or sometimes just "lutes."[2] Some European books call them "lute and lyre." But the sê is neither a lute nor a lyre but a kind of psaltery, as is the ch'in. There are several sizes of sê, the largest being nearly seven feet long. A very ancient legend says that the sê had originally fifty strings but that "when a certain Miss Su was one day performing on the sê



Drawing of a Sê.
From Van Aalst, p. 63.

in the presence of the Emperor Huang Ti (2698 B.C.) the strains of the instrument impressed him so deeply and rendered him so sorrowful that he forthwith ordered the number of strings to be reduced by one half."[3] The sê is built on the same principle as the ch'in, that of a sounding board slightly rounded on top and flat below, with silken strings stretched the length of it and fastened underneath with pegs. There are two round sounding holes in the under side. The tail of the instrument slants downward somewhat from the body, a feature which is not paralleled in the ch'in. At each end is a ridge, perhaps an inch high, over which the strings pass before descending to the under side, each through its small hole. There are twenty five silken strings, each formerly raised on a movable bridge and the five groups of five bridges were said to represent the five colors, red, yellow, white, blue, and black. The sê is now tuned to the pentatonic scale and only the first ten strings

[1] Shih Ching, Pt. II, Bk. VI, Ode IV, Legge's Translation of the Chinese Classics, Vol. IV, Pt. II, p. 367.

[2] Shu Ching, Pt. II, Bk. IV, Chap. II, 9. Ibid., Vol. III, Pt. I, p. 87.

[3] Van Aalst, p. 62, quoting from the Erh Ya, a dictionary written by a disciple of Confucius.

have bridges. The old method of stringing at the tail end is uncertain. The strings seem to have been carried over the end of the board, but to have been brought up to the top of the board again through the holes and tied at the ridge.

The sê is of just as venerable antiquity as the ch'in, and associated with it from earliest times, yet it seems to be not so completely hedged about with allegory as is its companion. The present number of strings is the same as the instrument had in Huang Ti's time, twenty-five. But there have been at various times twenty seven, nineteen, or twenty three. A small variety of the sê, called the *Tsêng*, 箏 has only fourteen strings. The notation for the sê is much the same as for the ch'in, but the sê is always played in octaves, two notes at a time. It is supposed to have a range of five octaves.

Shêng Player.
From the Stela of 551 A.D.
In the University
Museum.

The sê may not have been considered quite as classic as the ch'in, but it was a very poetic instrument, was much used to accompany singing (see the poem quoted on page 330) and had a place in court and religious ceremonies. The volume of tone it gives is not great, but the quality is very sweet.

The second figure from the right on the stela of 551 A.D. is playing a shêng, another extremely ancient Chinese musical instrument. The *Shêng* 笙 or Chinese mouth organ, looks something like a teapot with bamboo pipes of various lengths sticking out of it. The performer puts the spout of the teapot to his mouth while his fingers play on holes in the pipes which are close along the rim of the bowl. A great deal has been written about this very interesting and unique instrument,[1] but only a short description can be given here.

Its invention, as has already been stated, was ascribed to Nü Wa, who was said by some to have been the sister of Fu-hsi. The earliest writings refer to it as ancient. It is mentioned many times in the Odes and in the Book of History. These are lines from an Ode written in the 12th century B.C.:

> I have here admirable guests;
> The sês are struck, the shêng is blown.
> The shêng is blown till its tongues are all moving.[2]

[1] See Eastlake, China Review, August, 1882, and Hermann Smith, The World's Earliest Music.

[2] Shih Ching, Pt. II, Bk. I, Ode I, Legge's Trans. of the C. C., Vol. IV, Pt. II, p. 245.

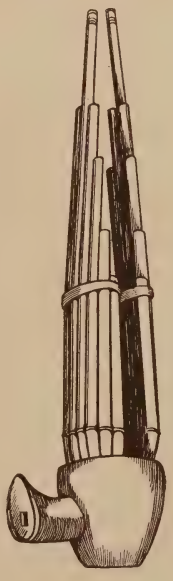
And from a poem probably of the 8th century B.C.:

> When we have seen our prince
> We sit together with him and organs are played.[1]

Also:

> "My husband looks full of satisfaction
> In his left hand he holds his reed organ."[2]

besides the quotation already given on page 327. The shêng is mentioned in the Book of History among the instruments used by K'uei in his concert,[3] and in the Music Chapter of the Li Chi several times. Originally the windchest, or "teapot" part, was a calabash, for which wood later became a substitute. Dr. Eastlake says that in ancient times there were, according to the Erh Ya, "two distinct forms of the shêng; the largest and probably more ancient known as the ch'ao, or 'bird's nest,' the smaller known as the ho, or 'concord.' . . . The scale of these two instruments must have been different, as the one had nineteen, the other thirteen reeds."[4] It is impossible to make out from the early sculptures just how many reeds are represented. They were very evidently arranged in the two groups in Han times as now, however, as the two sections are clearly indicated in some of the Han reliefs. The popularity of the shêng is attested to not only by the ancient literature but by the Han, Wei, and T'ang sculptures and paintings. Wherever there are musicians there is a shêng player. The instrument is so peculiar in shape that there is no difficulty in recognizing it. The musician on the right in the scene from the Pillar of Nan Wu Yang (see page 345) is playing a shêng. Another appears on the stone from Chiao Ch'êng Ts'un (page 339) and again on the slab, Chavannes No. 160. It is frequently represented on Wei sculptures such as the two stelae in this Museum. The delightful little player on the tablet of 551 A.D. has already been mentioned. The other stela, of the time of Wu Ping, shows a tiny performer on the shêng



Drawing of a Shêng. Showing the present shape of mouthpiece. From Eastlake.

[1] Shih Ching, Pt. I, Bk. XI, Ode I. Ibid., Vol. IV, Pt. I, p. 191. Instead of shêng the character huang was used, a term for the little metal tongues inside the reeds of the shêng.

[2] Shih Ching, Pt. I, Bk. VI, Ode III. Ibid., Vol. IV, Pt. I, p. 113.

[3] Shu Ching, Pt. II, Bk. IV, Chap. II, 9. Ibid., Vol. III, Pt. I, p. 87.

[4] Eastlake, China Review, August, 1882, quoted by Van Aalst, p. 81.

Shêng Player.
From the Stela of the Time of Wu Ping, c. 575 A.D.
In the University Museum.

floating through tree tops, blowing away as if totally oblivious to his surroundings. Blowing is not the correct term, however, for the shêng was played by suction. The sucking in of the air by the performer is said to be very bad for the health, bringing on lung troubles of various kinds. No performer is known to live longer than forty years. Perhaps this is why few musicians can be found today who can play this instrument. Among the most beautiful examples of musicians playing the shêng should be mentioned the little figure engraved on a panel of the small sarcophagus for the ashes of a Buddhist priest of the Sui dynasty. This is in the Boston Museum of Fine Arts. The Wei stela of 534 A.D. in the Metropolitan Museum shows another exquisite example.

Shêng players are often found among the grave figurines of the T'ang dynasty. One of the finest of these is of the set of three belonging to the group of Princess with dancers and musicians. This dainty little lady is seated on the ground, clad in a long high waisted robe and wearing her hair in two large knobs. She has the mouthpiece of the shêng to her lips and the instrument tipped slightly toward the left shoulder. The attitude of the performer is not correct and details are not shown; in fact, the shêng is represented as a mere cone rising out of a bowl like form, without delicacy or grace. While the general shape of the shêng is in all these early representations unmistakable, it is hard to judge of the shape of mouthpiece or number of reeds. The mouthpiece in them all, however, appears to be long and slender, not short and stubby as in the shêng illustrated on page 349. The Boston Museum example mentioned, the beautiful specimen in the Shosoin, and the paintings found at Tun Huang, however, all show the shêng with a long, slender, curved mouthpiece like a tea or coffee pot spout. This must have been the early type. Moule says that the shêngs used by the Lamas from Peking seemed larger than the common type and also had the

Shêng Player.
Grave Figurine of the T'ang Dynasty.
In the University Museum.

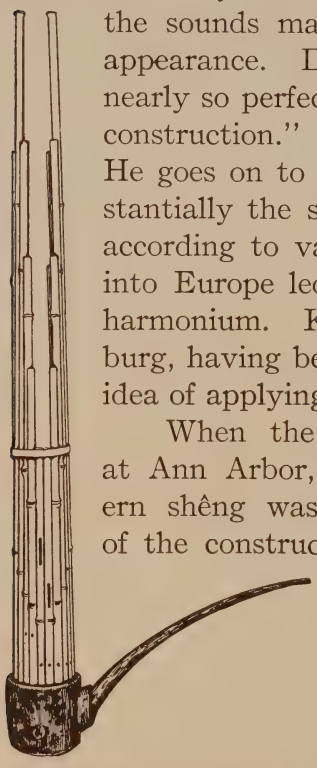
"old fashioned coffee pot spout mouthpiece, perhaps made of pewter, which is now rarely seen." We show here a detail from one of the Tun Huang paintings. The exact number of reeds can not be determined; perhaps the accuracy of the artist in that respect should not be too far trusted anyway where such a large number of pipes is involved. This detail agrees, however, in every way with the T'ang example in the Shosoin, except perhaps for the variety in the lengths of the reeds.

The character shêng is made up of the radicals bamboo and to produce, in other words, "music made by reeds." The ancient shêng, like the modern, was composed of the three parts, air chamber, mouthpiece, and reeds or pipes. The air chamber was rounded like a bowl and made of wu t'ung wood, or sometimes polished redwood. At the bottom a small round piece of ivory pierced with five holes let in the air. The mouthpiece has already been discussed. It was usually tipped with ivory. In examples that exist today the seventeen reeds stand in holes around the rim of the bowl, packed closely side by side except on the right hand side of the instrument, where a small gap may be left. They are arranged symmetrically according to height, the two longest being in the middle, front and back, and the others descending like steps to the short ones at the sides. A metal band binds them all together at the level of the shortest ones or just below. Each pipe goes down over half an inch inside the rim of the air chamber and at the lower end has fastened in it with wax a thin metal reed, the huang or tongue referred to in the classics. Four of the seventeen pipes are mute, contributing only to appearance, and these of course do not have either the tongues or the finger holes. The finger holes are small circular openings near the rim of the air chamber. Each sounding pipe has also an oblong slit on the side. The performer when playing the shêng holds it inclined to the right, but according to the early sculptures and paintings this was not the case in Han, Wei or T'ang times, for it is always represented as held directly in front of the player and with the pipes standing up vertically. There is no evidence of the horizontal position in which Moule says it was held when played. The scale Moule has ascertained to be G, A, B♭, C, D, E, F, G, A, B♮, C.

Shêng Player. Detail of a Painting Found at Tun Huang. Stein, The Thousand Buddhas, Pl. VI.

The finger hole must be stopped in order to get the note from a reed.

The beautiful Chinese shêng in the Shosoin at Nara holds first place in the world as the most superb example of any time. The grace and delicacy of the instrument, its beauty of proportion and finish are unsurpassed. The air chamber and mouthpiece are of very dark wood inlaid with silver and the bamboos are beautifully selected, with joints exactly matching. We are glad to say that the sounds made by this instrument are in keeping with its appearance. Dr. Eastlake says, "No other instrument is nearly so perfect either for sweetness of tone or delicacy of construction." (He is speaking of Chinese instruments.) He goes on to say, "The principles embodied in it are substantially the same as those of our grand organs. Indeed, according to various writers, the introduction of the shêng into Europe led to the invention of the accordion and the harmonium. Kratzenstein, an organ builder of St. Petersburg, having become the possessor of a shêng, conceived the idea of applying the principle to organ stops."[1]



The T'ang Dynasty Shêng in the Shosoin at Nara. From the Toyei Shuko.

When the Stearns Collection of Musical Instruments at Ann Arbor, Michigan, was catalogued in 1918 a modern shêng was taken apart and exhibited to show details of the construction.

Of *flutes* the Chinese had many different kinds. Usually drums and flutes are the first musical instruments invented by any race and the Chinese were no exception. A number of types are mentioned in the earliest writings, but no one seems to have survived sufficiently unchanged for us to be sure of the details of its construction, unless it be the p'ai hsiao or pan pipes. Early descriptions are very vague and later the names became much confused, so that the exact identification of the various kinds of flutes represented on the early monuments seems impossible, at least at present.

It would seem that the Chinese invented first the six lüs, each pipe giving one note, and that then the *P'ai Hsiao* 排簫 or syrinx was developed from it, a series of ten of these pipes fastened together with a silk cord (an invention attributed to Shun). The whistle pipe

[1] Eastlake quoted by Van Aalst, p. 82.

or vertical flute followed, for it was discovered that by piercing holes at various places in a reed and stopping these holes one by one with the fingers the same pipe could be made to produce many different notes. The lüs developed into the twelve standard pitch pipes while the p'ai hsiao grew to a series of twelve to correspond, then became enlarged to sixteen, then twenty four. (It has at present sixteen and is used only in ritual music). The tiny p'ai hsiao player on the Wei stela in the Metropolitan Museum is playing on a syrinx made up, apparently, of twelve pipes. Except for the addition of an ornamental wooden case, the P'ai Hsiao of today is practically the same as the ancient one. The pipes are tuned to the twelve notes of the lüs and the four upper notes of the octave below.

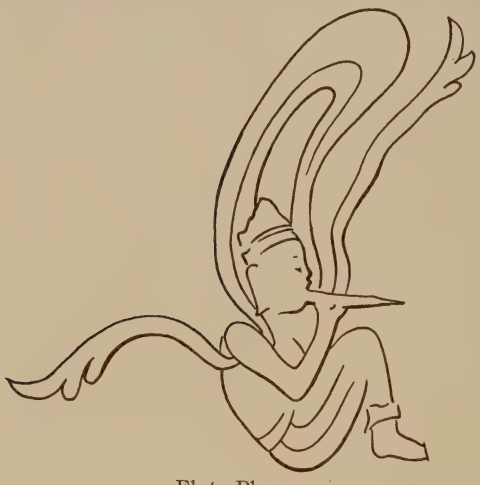
In the case of the single pipe pierced with holes, endless experimentation followed until many varieties of flute were developed. Some were long and some short, some were held vertically and blown at the end, others were held transversely and blown in the middle or near one end. Most of them were originally of bamboo, as is shown by the bamboo radical in the characters.

Player on the Pan Pipes.
From a Stela of 534 A.D.
In the Metropolitan Museum.

The flute mentioned in the oldest poems of the Book of Odes is the *Kuan* 管. This is named in the *Na*, the sacrificial ode of Shang quoted on page 329. Again it appears, in company with the P'ai Hsiao, as the flute in the Early Chou poem of the Blind Musicians (see page 329). The character is found in the Book of History in the list given by K'uei of the instruments in his concert,[1] the Li Chi contains it many times, and it is mentioned in the Chou Li. According to Dr. Legge, the Kuan was in some way double, but he says he does not understand just how[2] and I have discovered no evidence to show that it was double originally. The character itself means pipe or pipes and is made up of the radicals for bamboo and official, which suggests that this particular flute was the officially recognized form in the earliest days. Kuan may have been merely a general term for flute. The Kuan today is a pipe of wood fitted with a double reed at one end to form a head and having seven finger holes

[1] Shu Ching, Pt. II, Bk. IV, Chap. II, 9, Legge's Trans. of the C. C., Vol. III, Pt. I, p. 87.
[2] Dr. Legge's Translation of the Chinese Classics, Vol. III, Pt. I, p. 88, note.

above, with, Giles records in his Dictionary, either one or two below. The instrument is only about 8 inches long. According to Tsai Yü of the 16th century, two slightly shorter flutes (7¼ inches) were joined together to form a double pipe called Shuang Kuan. Ma Tuan-lin of the 14th century describes the Shuang Fêng Kuan as being a double pipe, each member of which had a double reed and four finger holes, the left pipe giving the bass notes, the right the treble. Notes to the Chou Li explain Kuan as "like the Ti but smaller, two are joined together and so blown."[1] But we suspect that originally the Kuan was a little whistle pipe, a primitive fife. Whether at the time the classics were written it had already developed into the reed instrument of double form we do not know,[2] but it is certain that a whistle pipe about 8 inches long continued in popular use far into the T'ang period, for there are plenty of them represented in the Tun Huang paintings.[3] Whether double or single we cannot tell, but it is evidently a small 8 inch pipe of some kind upon which the little piper of the Wu Ping stela, in this Museum, is playing with such absorption. Certainly of all representations of flute players in art this is one of the most beautiful known, the very line design being music itself, an exquisite bar of sweet notes.



Flute Player.
From the Stela of Wu Ping Period.
c. 575 A.D.
In the University Museum.

The Kuan, or Kuan Tzu as it is now often called, is still a feature of wedding and funeral processions.

Two most interesting ancient flutes were the *Yo* 籥 and the *Ti* 笛. The Yo was a short vertical flute with three (some authorities say six) holes, and was carried by dancers. It is still used by them to accompany their movements, but since the Sung dynasty, and perhaps much earlier, it has been a mere wand or stick and not a

[1] Moule, Jour. of the N. China Br. of the R. A. S., Vol. 39, 1908. But the notes to the Chou Li are of much later date than the Chou Li itself.

[2] Perhaps after the Yo and Ti became separated.

[3] Miss Schesinger's article in "Serindia," Appendix H, p. 1467.

playable flute. Reference to it in the Book of Odes would seem to indicate that it was played during the dance in the earlier days.

> "The Ya and the Nan which they sing
> Dancing to their flutes (yo) without error."[1]

And again in an Ode of the seventh century B.C. a Yo is carried in the dance:

> "With my large figure
> I dance in the ducal courtyard.
> . . . . . .
> In my left hand I grasp a flute (yo)
> In my right I hold a pheasant's feather."[2]

Dr. Giles says that the Yo originally formed part of the double flute, being the treble of which the Ti was the bass, and that it was held in the left hand, while the Ti was held in the right.[3] Doubtless it had then only the three finger holes (as the character would seem to indicate). And probably it remained much the same for several hundreds of years after it became separated from its other half. Tsai Yü, a writer of the late sixteenth century, saw a genuine specimen of the ancient Yo and described it as being 20 inches long and having three finger holes, 3, 5, and 7 inches respectively from the lower end of the pipe. It would appear, from the fact that the Yo is mentioned without the Ti in the Odes, that it had become separated from its companion before the eighth century B.C. Perhaps the dancers had found it difficult to handle the double form during their evolutions. Yüeh is another name for the Yo.

The question of the development and fate of the ancient Ti is much involved, vagueness of description and confusion of names here reaching an extreme. Two facts seem to stand out of the general chaos, however. The first is that "the ancient Ti was certainly a vertical flute,"[4] and the second is that the modern Ti is certainly a transverse one. Did the Ti actually undergo such a drastic change or was, as Moule suggests, the name revived at some time and applied to the wrong instrument? Involved in this question is that of the origin of the *Hsiao* 簫, a vertical flute intimately connected

[1] A more correct translation than the metrical one given on page 327, see Legge's Translation of the Chinese Classics, Vol. IV, Pt. II, Bk. VI, p. 367.

[2] Shih Ching, Pt. I, Bk. III, Ode XIII, Legge's Trans. of the C. C., Vol. IV, Pt. I, p. 61.

[3] Giles, Dictionary, see Yo and Ti.

[4] Moule, Journal of the N. China Br. of the R. A. S., Vol. 39, 1908, p. 65, note.

with ritual and a favorite with the educated classes. Its length is ordinarily about 22 inches and it has five finger holes above and one below. According to tradition it was invented by Yeh Chung[1] of the Han dynasty, but the general opinion among Chinese has been that the Hsiao is the ancient Ti. Hsiao, of course, originally meant merely flute and referred to the pan pipes. The full name of this flute is Fêng Huang Hsiao, though it is called simply Hsiao in ritual. Tsai Yü believed that the Hsiao was a descendant of the Yo, taking its place when the Yo became a mere wand. In regard to the transverse Ti, it, he says, was a foreign instrument, derived from the Ch'iang tribe on the western border of China, and used, from the Han dynasty on, only by popular bands.

Flute Player.
From a Painting found at Tun Huang.
Stein, The Thousand Buddhas, Pl. XXX.

It seems best to cast names aside for the present and see what sort of flutes were represented on the monuments. The chances are that when the double flute became separated and the dancers carried and played the Yo, that the Ti was taken over into the orchestra. Later, when the Yo became a mere stick, some flute had to play the treble and so the orchestra acquired something to play the parts the Yo had played. We would thus expect to find two vertical flutes in the orchestra more or less like the Yo and the Ti. We do. On the Han bas reliefs a long, vertical flute is conspicuous (see pages 343 and 344). It may be the Hsiao or it may not. Some specimens of the Hsiao have been known to be 27 inches long. Among the orchestras of the Tun Huang paintings and frescoes are many performers on a whistle pipe that appears to be about 16 inches long. Unfortunately, we cannot make out the number or position of the finger holes in these representations. Otherwise the identification might easily be made.

We suspect that the flute played by the third musician from the left on the stela of 551 A.D. is not one of the old classical instruments just mentioned but a then rather new importation, an instrument destined to become a great favorite in China, the *So Na* 鎖吶 or Chinese clarionet. It was a wooden pipe fitted, in modern examples, with a copper bell at the end, the total length being 18 or 20 inches. The mouthpiece is a small reed fixed in the upper end, oboe fashion. There are seven holes on the upper side and one for the

[1] Van Aalst, p. 70. Giles, Dictionary, see Hsiao.

thumb on the lower. It is much used at weddings and funerals and the noise it produces has been described as "shrieking and horrible." The name in Chinese is meaningless, So Na being merely a transliteration of the Persian name for the instrument, Zourna. It was probably introduced into China some time early in the Christian era. It is represented again in the hands of one of the four men musicians, grave figures of the Ming dynasty, a set which was published in the MUSEUM JOURNAL, December, 1925.

No discussion of flutes is complete without mention of the *Ch'ih* 篪. It was a bamboo flute about 18 inches long and played transversely. There were right handed and left handed ones. The blow hole was 5½ inches from one end and there were six finger holes, five on the outer side and the sixth on the inner. The Ch'ih is mentioned several times in the classics.

> The elder brother blows the hsüan (ocarina).
> The younger blows the ch'ih (flute).[1]

> "Heaven enlightens the people
> As the bamboo flute (ch'ih) responds to the
> porcelain whistle (hsüan)."[2]

Flute Player.
From the Votive Stela, of 551 A.D.
In the University Museum.

Moule seems to think that the ancient Ch'ih was a different sort of flute, however, for he says, "The use of a flute of this nature under the name of Ch'ih seems to date at least from Sung." The Ch'ih seen and described by Tsai Yü in the 16th century was 16 inches long. "Blowing it produced a sobbing sound, its notes were harmonious and refined, a veritable relic of the Three Dynasties, rare and invaluable."[3] It seems, at any rate, to have been a transverse flute. The Erh Ya (c. 400 B.C.) says the ch'ih was made of bamboo, its length was 16 inches, one hole opened upwards, and it was blown transversely. It was said to be, as one might guess from the Odes quoted, in tune with the hsüan. This latter instrument was a peculiar thing of the ocarina type. It was one of the most ancient of the Chinese musical instruments. The *Hsüan* 壎 was a cone of baked clay (later porcelain), with a

[1] Shih Ching, Pt. II, Bk. V, Ode V. Legge's Trans. of the C. C., Vol. IV, Pt. II, p. 346.
[2] Shih Ching, Pt. III, Bk. II, Ode X. Ibid., Vol. IV, Pt. II, p. 502.
[3] Moule, Jour. of the N. China Br. of the R. A. S., Vol. 39, 1908.

P'i-P'a Player.
From the Stela of 551 A.D.
In the University Museum.

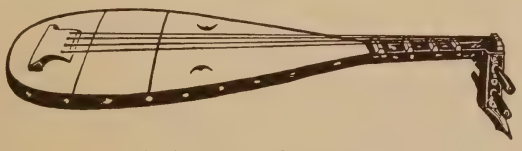
blow hole at the apex, and five finger holes (later a sixth was added). It represented one of the Eight Sounds (see page 336). There are no representations of either of these ancient instruments, ch'ih, or hsüan, on any of the early monuments in the Museum. Transverse flutes appear on the Ming screen, the Ming embroidered hanging and some of the porcelains, however.

The musical instrument most frequently depicted on the early stelae and in the hands of grave figurines of the T'ang dynasty was the *P'i-P'a* 琵琶. This is shown as a kind of lute, or, more properly, a balloon guitar, since the back is flat, not convex. There are two such instruments on the Wei stela of 551 A.D. and two on the stela of Wu Ping. Two distinct types can be distinguished, both of which exist in much the same form today and are as popular as apparently they were fifteen hundred years ago! The four stringed type is perhaps the better known and probably the older, so that will be discussed first.

The p'i-p'a seems to have been unknown in China in the earliest times; at least, there is no mention of it in the classics. One of the earliest references to it in literature is in the Fêng Su T'ung, written in the second century A.D., which tells us that the ancient p'i-p'a was 15 inches long and had four silk strings which represented the four seasons, a bit of allegory which points to an ancient origin. Just how ancient the p'i-p'a was at that time, however, we are not told. The T'ang History states that its origin was not known. There are legends to account for it though. One has it that the p'i-p'a was invented in the third century B.C. after the disappearance of the ancient music (in the Burning of the Books, 212 B.C.) and Yüan Hsien, one of the Seven Sages of the Bamboo Grove, was sup-

P'i-p'a Player.
From the Stela of the Wu Ping Period.
c. 575 A.D.
In the University Museum.

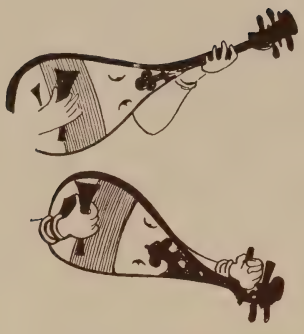
posed to have been an excellent performer on it. Another story says that the p'i-p'a was introduced into China from Central Asia by the Chinese Princess Wu-sun Kung Chu, who had married a prince of the Turkic state of Wu-sun, and returned to China in 51 B.C., many years after her husband's death. Certainly the popularity of the instrument in far western China is attested to by the numerous representations of it in the paintings from Tun Huang and the frescoes on the walls of the caves there, a fact which at least does not weaken the theory of a western origin. That the p'i-p'a does not appear on the Han sculpture so far known, while the flute, shêng, and ch'in do, would go to argue the theory of an introduction later than the third century B.C. By the Wei period, however, it had won its prominent place in the popular orchestra, which position of importance it held all through the T'ang dynasty, if we may judge from the frequency of its appearance on the monuments. It was no



A P'i-P'a of the T'ang Dynasty.
Specimen in the Shosoin, Nara.
Drawn from the Toyei Shuko.

longer the small instrument mentioned by the Fêng Su T'ung, but had increased in size to about three feet in length and one foot in width. Again we are most fortunate in having an original T'ang example in the Shosoin, in fact, five beautiful specimens there of the four stringed type and one of the five stringed type.

The p'i-p'a had a shallow, pear shaped body with a flat sounding board, across which was stretched a wide plectrum band. The Shosoin examples have plectrum bands of leather most skillfully painted. In front of this band, between it and the neck, were two crescent shaped sounding holes. The neck was rather short and the head containing the pegs or screws was bent far back, almost at right angles to the neck. The four silken strings were attached to a prominent bridge, stretched across the plectrum band, passed over four frets, were carried over the end and tightened in the usual way by means of the pegs. Literature informs us that there were eleven or twelve frets, the lower ones being on the sounding board itself. This is the case with the modern p'i-p'a, but the probability is that the Shosoin examples and the Japanese biwa, which was copied



Two P'i-p'as.
From a Painting from Tun Huang.
Stein, The Thousand Buddhas, Pl. II.

from T'ang specimens, represent the more ancient instrument, to which the frets on the body are a recent addition, comparatively.

The biwa also has the sound holes which are so prominent in the Shosoin examples and in the Tun Huang paintings and so rare in the modern Chinese instrument. The p'i-p'a was played with a large fan shaped plectrum, nearly all the notes produced in tremolo. The plectrum was introduced in the T'ang dynasty. The Tsou P-i-p'a ("twanged by hand" p'i-p'a), of earlier times was, we are told, played on horseback. The strings, according to Van Aalst, were tuned to C, F, G, C.[1]

The p'i-p'a was a most artistic and decorative instrument. The narrow band of dark wood forming the curved sides of the sound box is much made of by the painters who produced the Tun Huang paradise scenes. The two p'i-p'as illustrated here are details from a fragment secured by Stein. The instrument below is probably a tenor, the other a bass; they seem to differ mainly in length of neck. The general shape of the p'i-p'a, its curving lines, its proportions, the piquant throwing back of its head,[2] with the ornamental pegs suggesting hair pins, all appealed to the artist. The artist not only emphasized the beauty of it in his paintings but lavished his talents upon the instrument itself. The Shosoin examples are all of dark wood on sides and back, beautifully inlaid with mother of pearl, and the plectrum bands are elaborately painted. Such minute details would hardly be indicated in the paintings, but the instruments represented in the fragments from Tun Huang give evidence of exquisite decoration. Often the dark wood (?) of the neck is carried down onto the sound board in a scroll form suggestive of the brass bindings of a mediaeval chest.

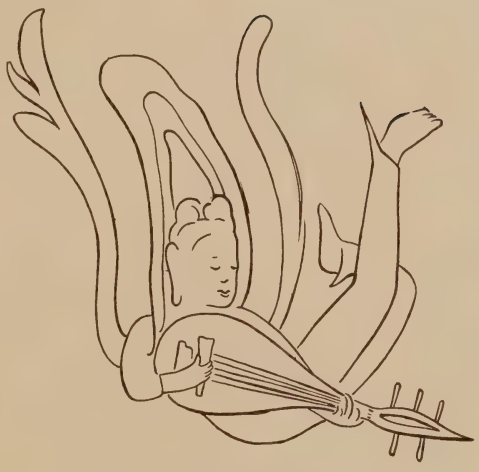
P'i-p'a Player.
Grave Figurine of the T'ang Dynasty.
In the University Museum.

The diminutive grave figurine of a young girl playing a p'i-p'a is a companion to the shêng

[1] Or probably they correspond more nearly to our D, G, A, D.

[2] There are some examples illustrated in the Tun Huang paintings which show the head not bent back.

player already described and has the same charm and beauty of pose and poise. The four strings of the p'i-p'a are indicated by grooves in the clay. There is another T'ang grave figurine carrying a p'i-p'a, a standing figure, and in that case also the head of the instrument has been broken off, but the five holes plainly indicated on the bridge show that it was intended to represent the five stringed type.



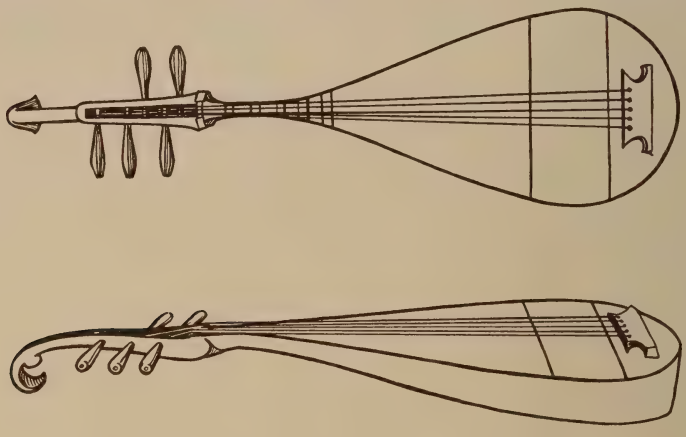
Player on Five Stringed P'i-p'a.
From the Stela of Wu Ping Period.
c. 575 A.D.
In the University Museum.

It would appear that the five stringed p'i-p'a was almost, if not quite, as popular in Wei and T'ang times as was its four stringed brother. It is represented in the University Museum by a figure on the stela of 551 A.D., on the Wu Ping stela, and the T'ang figurine already mentioned. The main differences are brought out clearly on the stela of the Wu Ping period. The body of the five stringed instrument was of a more slender, elongated pear shape and the head, or peg box, was not bent back at all, although it doubtless was curved gracefully at the end, as we see in the specimen in the Shosoin. The shape of this peg box is so very distinctive, like an open, very acute angled triangle, that there is no mistaking it when it is met with upon any of the monuments. The example in the Shosoin gives us a chance to examine it in profile as well as in front view. It is about half a foot longer than the four stringed p'i-p'as and, like them, is beautifully decorated with inlay of mother of pearl (and tortoise shell in this case).

Player of Five Stringed P'i-p'a.
T'ang Grave Figurine.
In the University Museum.

On the stela of 551 A.D. the head of the p'i-p'a represented on the left side is hidden behind the flute player, but the body of the instrument is large and there are five strings clearly indicated by grooves. The five stringed p'i-p'a was also played with a plectrum.

Literature informs us that the p'i-p'a had four or six strings! Whether in the case of the six stringed instrument the shape was different or not it is hard to tell. A little T'ang figurine in the Rhode Island School of Design holds a p'i-p'a with a peg box characteristic of the five stringed type, but the lines painted to represent strings seem to indicate the presence of at least six. This Museum possesses a small T'ang painting representing monks and Bodhisattvas bearing offerings and one of the figures is carrying a huge eight stringed guitar with a circular plectrum band and a peg box bent far back, as in the four stringed p'i-p'as. Whether such an instrument was ever in actual use or not in China we have no



The Five Stringed P'i-p'a.
Specimen in the Shosoin, Nara.
Drawn from the Toyei Shuko.

further evidence. The painting may have been made in Central Asia and the instrument may be a western type, or even a religious extravaganza.

It has been said that the Chinese were unique in having never invented a *Harp* of their own. Probably they never felt the need of one, having such instruments as the ch'in and the sê to serve them in the accompaniment of song. There is no evidence, either in the language or in art, of any harp having existed in China before the Wei dynasty. But, in company with the p'i-p'a, it makes its appearance on the Wei sculpture and is represented so often in the Tun Huang paintings and with T'ang grave figurines that we conclude it had become a prime favorite in a short while. That it was introduced from the West with the advent of Buddhism seems probable and would account for its decline in favor after the T'ang dynasty.

Player on the Five Stringed P'i-p'a.
From the Stela of 551 A.D.

Finally, it was so completely forgotten that later writers did not even mention it and Europeans did not know until recently that the Chinese had ever had a harp. Mrs. Richard, to be sure, reproduced in her paper a drawing of an "ancient harp" which has 12 strings, but she does not state from what source she obtained it. We do not even know what name the Chinese gave it. We only know that it appeared about the 6th century A.D., that it was depicted very often on monuments of the Wei and T'ang periods, that its characteristics are so definite as to leave no doubt that it was a real and not an imaginary instrument, and finally that it disappeared again some time after the great religious age of T'ang. What we would know must at present be learned from the representations themselves.

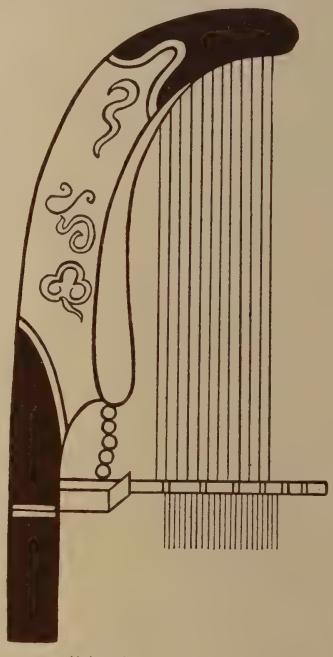
One of the clearest pictures of the harp is that shown in the fragment of a painting found at Tun Huang, a detail of which is reproduced on page 345. The construction is very simple. There is a high curved sound box which ends below in a spike for supporting the instrument on the ground. At the lower end of the sound box, just above the spike, a horizontal bar is attached to which are fastened the strings. There is no vertical pillar. The number of strings cannot be exactly counted and could perhaps not be depended upon to be correct anyway, but there seem to be sixteen. The performer sits on the ground, holds the sound box against her body while the spike supports the weight, and extends an arm on each side of the strings just as a harp is played today. The Persians had an instrument constructed in the same way which in the 16th century they called "chang." Chang is hardly a Persian word; one is tempted to see a connection between this name and the Chinese word chang, which means "to sing or lead in singing." But the Persians had harps long before the Chinese, and the Babylonians before them. There is a famous bas relief

Eight Stringed P'i-p'a.
From a T'ang Painting.
In the University
Museum.

Harp Player.
From the Stela of 551 A.D.
In the University Museum.

dating from the time of Gudea (2350 B.C.), which was found at Telloh and upon which is represented an ancient Sumerian harp of eleven strings. It had a front pillar and was called balag. But this feature of a front pillar did not persist. The early world seems to have preferred the more primitive but perhaps less clumsy type.

There seem to have been several different sizes of harp. The one played by the musician on the left of those on the stela of 551 A.D. is a large harp, evidently of the same type as those prominent in the orchestras of the Paradise paintings from Tun Huang. The sculptor has indicated here by scratches that the sound box was of wood. The Tun Huang paintings show that often the wooden sound boxes were beautifully inlaid or otherwise decorated. On the stela carving a narrower piece of wood ran inside the sound board and received the strings stretched from the horizontal bar below, where we can see them fastened around the bar. There are sixteen strings represented. But a smaller size of harp seems also to have been very popular. It appears about one half the size of the other. The stela of the time of Wu Ping shows a celestial musician flying with a small harp. The spike for support is quite in evidence in this representation. Ten strings can be counted. Among the T'ang grave figurines in the Museum two carry these small harps. The seated figure belonging to the set of which we have already described the shêng and the p'i-p'a players is the more charming. She is represented as tightening a string (?), for which purpose she is holding the harp upside down in her lap. The spike has been broken off, if one was ever represented. Grooves in the horizontal bar, which is in this case very wide (as is true of an example in the



"Ancient Harp."
Mrs. Richard's Paper, p. 37.

Metropolitan Museum also), seem to indicate twelve or fourteen strings, but details are not clear. The standing figurine has only the sound box still remaining. Horizontal bar and spike are both missing.

Harp Player.
From the Stela of the Wu Ping Period, c. 575 A.D.
In the University Museum.

There is one more representation of a musician among the collections of the Museum belonging to the Wei and T'ang dynasties, a small grave figurine of a Princess seated, playing a diminutive pair of cymbals. These probably represent the type known as *Ch'a Po* 岔鈸. These were small heavy cymbals about 4 inches in diameter and slightly bell shaped, rising to a knob which was held in the fingers and to which was attached a cord which connected the pair. They were struck together lightly but with a direct motion, not a "side swipe" as in the case of the larger, thinner, plate like cymbals which appear in later works of art and were, we should guess, comparatively recent importations. Both types are represented on the Ch'ing dynasty porcelains in the University Museum. One fine club shaped blue and white vase of the K'ang-hsi period (1662-1723) shows a princess entertained by a dancer, while seven ladies provide the music. Both types of cymbal are seen here, also a gong chime with five gongs, a whistle pipe, clapper with three leaves, a shêng with the pipes arranged in circular tiers, and a drum of the modern Ying Ku variety.

Musician Fixing the Strings of her Harp.
T'ang Grave Figurine.
In the University Museum.

We cannot leave the subject without mentioning some of these later works of art in the Museum upon which are displayed musicians and musical instruments. Some of the instruments are the same as the early ones already described, others have not been mentioned. The Ming Coromandel Screen is most rich in this subject.

Upon this fine carved wooden screen, decorated with colours and lacquer, are depicted scenes of court life, all concerned with the doings of the ladies of the palace centering around the Empress. The playing of the *ch'in* 琴 in one of the side rooms has already been

Musicians Depicted on the Coromandel Screen.
Ming Dynasty, 1368–1644 A.D.
Five gong Chime, Clappers, San Hsien, Four Stringed P'i-p'a, Transverse Flute, Vertical Flute, Tsêng, Shêng, Gong.
In the University Museum.

illustrated (page 346). The central scene shows the Empress enthroned in a large hall, while before her dancers perform to the accompaniment provided by ten female musicians. On the right of the dancers (the spectator's right) are five musicians playing the following instruments:

Detail of Standing Figure of a Harp Player. T'ang Grave Figurine. In the University Museum.

Clappers made of four flat slabs of wood about 4 x 14 inches, attached together at one end by a thong or silken cord which binds them like the leaves of a book. The outer slabs are held in the hands and pulled apart and then clashed together. They are a type of castanets and were used in the very early days. An ancient type consisted of twelve small slabs one foot long and one inch wide and called Ch'ung Tu. Some modern types have only two slabs. This four slab type was certainly in existence in the T'ang dynasty, as it is very popular in the paintings from Tun Huang, among which also appear many with more than four slabs.

The *San Hsien* 三絃, a three stringed guitar with small shallow cylindrical body and a very long thin neck without frets. It has three strings and the head with its three prominent pegs is the feature by which it is immediately recognized. There is no trace of it in early art. It was introduced in the Yüan dynasty. The Japanese "samisen" is no other than the San Hsien. The three strings are tuned to C, F, C or C, D, A, and it is usually, but not always, played with a plectrum. It is a favorite with ballad singers and musical entertainers, such as the geisha girls in Japan.

Cymbal Player. Grave Figurine of T'ang. In the University Museum.

The *Shêng*. The specimen represented looks clumsy beside the graceful example of the Shosoin.

P'i-p'a. The bent back head seems to indicate that this is the regular four stringed variety.

Pa Fang Ku. Tambourine in an octagonal frame.

On the left side of the dancers are the other five musicians. These play the following instruments:

The *Yun Lo* 雲鑼 or gong chimes, five small round metal discs hung in a frame sup-

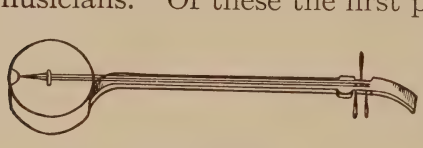
ported on a stick. This stick is held in one hand and the gongs are struck by a small mallet held in the other. There were usually ten gongs in the frame, as in the case of the instrument represented on the embroidered hanging to be described presently, but here only five are shown, as is also the case on the blue and white porcelain just mentioned. A chime with only four gongs is seen on the Palace Jar about to be noted.

Flute played transversely and having a dragon head represented at one end. This is a variety of the modern Ti called the Lung Ti, or Dragon Ti. A flute so ornamented was used only in ritual or at the court.

Whistle pipe. A vertical flute about 18 inches long.

A *Tsêng*, or small fourteen stringed sê, played by two ladies, one of whom holds it while the other taps the strings with a hammer. This small type of sê was used at imperial receptions (See page 348).

Among the Ming objects are the four grave figurines of male musicians. Of these the first plays a *shêng*, the second a *Gong* called *Lo* 鑼, which is suspended by a cord held in the hand, the third a *So-na*, and the fourth a drum.[1] There are also several Ming porcelains upon which are represented the Eight Immortals, for instance, the blue and white gourd bottles formerly in the J. P. Morgan collection. Of the eight immortal merry gentlemen and ladies, three, it will be remembered, are musicians. One plays a long transverse flute, another clappers, the third a peculiar instrument said to be Taoistic and very ancient. It is a bamboo tube perhaps three feet long upon which the performer pounded with two rods. Its form reminds one of the primitive drums of some African and South American tribes. We should judge that by the Ming period its use had already been long suspended and the impression one gets from the drawing of it is that the artist did not know what it really looked like and merely drew it from some older design without being himself familiar with it. It appears thus on several examples in the Museum.



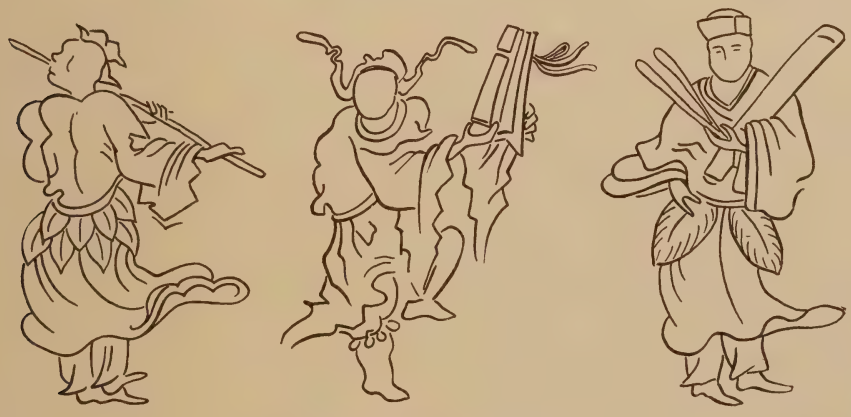
A San Hsien.
Drawing from Van Aalst.

Many of the later porcelains in the Museum Collection display designs in which the Eight Immortals figure. The types of the later ones remain much the same, the instruments varying slightly. On

[1] Published in the MUSEUM JOURNAL for March, 1926.

one late textile the flute played by Han is of the whistle pipe type instead of the transverse. Sometimes the clappers have four slabs, but frequently only two or three.

Scenes of court life are popular on the later Ch'ing porcelains. There are several painted with scenes of dancing, for which lady musicians are playing. One of the most charming is to be found on a pair of large palace jars of the K'ang-hsi period painted just alike in the famille verte decoration. Here, most delicately outlined, are the figures of six graceful ladies playing for a dancer who is performing before the Empress or some royal princess. A drawing to show some of the details is reproduced here. It will be seen that there are two flutes represented, one played vertically, the other trans-



Three of the Eight Immortals.
From a Ming Jar in the University Museum.

versely. Cymbals of both types are depicted, the small, thick, flattened bell type and the large dinner plate variety called *Ta Po* 大鈸 and said to have been introduced originally from India. They are like our modern cymbals and are clashed together with a side swiping stroke. A gong chime with four gongs and a clapper with two slabs of wood make up the orchestra. The popular orchestra seems then, as now both in China and in the West, to have been made up chiefly of instruments that are noisy. The two flutes are the only ones of the six that could have been very sweet, and it is very likely that one of these, the whistle pipe, had a very shrill, unpleasant note. The elaborate borders represented around the scenes on these vases are filled with the objects of scholars and mandarins, the eight precious things, the hundred antiques, and other such details. Among them, and similarly on other vases, may be

seen the ch'in wrapped in its embroidered bag, and sometimes the shêng.

One of the recently acquired textiles, a very fine embroidered palace hanging probably of the Ming dynasty, displays a number of musicians among its scenes of palace rooms and gardens. It will be more fully described in a future article. But attention may be called to the figures of musicians on it. In a room on the left we see a lady playing a five stringed *Ch'in*. A group of four standing out on a terrace are playing the following instruments:

A *Ying Ku* 楹鼓, a large drum supported on a frame with the drum head uppermost. It is about two feet in diameter and stands

Musicians from a Palace Jar of the K'ang-hsi Period, 1662–1722 A.D.
Vertical Flute, Small Cymbals, Large Cymbals, Transverse Flute, Four gong Chime, Clappers.
In the University Museum.

three feet from the ground. The lower part of the drum is concealed by draperies hung from the frame, out of which the drum seems to rise like the head of a barrel. It is beaten by large malletlike drum sticks. We are told that this drum existed from very early times, at least from the Ch'in dynasty, when it was called Chien Ku. This character Ying is different from that in the name of the Han drum.

Cymbals of the large type called *Ta Po.*

Clappers with two leaves, properly castanets.

A *Mu-Yü* 木魚, wooden fish. This was a block of wood hollowed out and shaped more or less like a skull and painted a bright red. Some were as large as a skull, others much smaller. It was struck with a small mallet to mark time. It is an unusual instrument to find depicted on such an object as this hanging. The

mu-yü is used by priests when reciting prayers or begging. Perhaps, as we see it represented here among the musical instruments used at court, it had a more aristocratic beginning. Except that "a fish of T'ung wood is mentioned by Huai Nan Tzŭ of the 2nd century B.C. as used when praying for rain in the autumn,"[1] we know nothing of its history.

Three more musicians are standing at the corner of a building near an open pavilion in which is seated a royal lady surrounded by attendants before whom a dancer is performing. They are evidently providing the music for the dance. The instruments represented are the following:

A *Transverse Flute.* This one is played with the blow hole near the right end.

The *Shêng.*

A *gong chime* with ten gongs in the frame. This is the real Yün Lo.

Also standing not far from the group above are two musicians performing respectively upon—

Cymbals, the small bell shaped type, and a *San Hsien.*

The Chinese possessed many more musical instruments than have been mentioned in this paper. For a perfectly complete list other works should be consulted.[2] I have described the more famous and interesting and especially those which are represented in the collections of the University Museum among the objects of the earlier periods. The beauty of many of the representations of celestial musicians can hardly be overdrawn. Music was a theme which evidently the Chinese artist approached with delight, a theme wherein he was free to indulge his fancy and exercise his genius for rhythmic line design.

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[1] Moule, Jour. of the N. China Br. of the R. A. S., Vol. 39.

[2] Moule, A. C.; A List of the Musical and other Sound Producing Instruments of the Chinese. Jour. of the N. China Branch of the R. A. S., Vol. 39, 1908.

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Amiot, M.; Memoire sur la musique des Chinois, 1776.

THE TRAGIC HISTORY OF IBI-SIN, KING OF UR

By Leon Legrain

During the last two seasons at Ur, and especially during the recent campaign, the Joint Expedition of the Museum of the University of Pennsylvania and the British Museum recovered several thousand tablets. These documents written in the Babylonian and Sumerian languages divide themselves into two main groups: historical texts and business records. Dr. Legrain who, as cuneiformist on the Expedition, during both seasons, had the task of interpreting these texts, made copies of them all and prepared his translations in the camp of the Expedition at Ur. The historical texts have already been completed and put in shape by Dr. Legrain for publication in a volume that will appear under the auspices of the Joint Expedition, in which volume Mr. Gadd and Mr. Sydney Smith of the British Museum will also contribute their share pertaining to the first two campaigns.

In anticipation of that publication Dr. Legrain has abstracted enough matter to illustrate briefly one of the minor aspects of his larger work, growing out of his studies of the documents coming under his observation at Ur. His purpose in this paper has simply been to assemble a number of dates occurring on these documents, confining himself to dates in the reign of Ibi-Sin, the last independent King of Ur, and of some of his immediate successors who were subject to other rulers.

THE dates on the clay tablets of Ur of the Chaldees afford a short chronicle of each king; each recorded date, coupled with the name, summing up in one or two lines the big event of the year. Thus, the year when so and so was made king, or the year when he rebuilt the walls of the city or the walls of the temple. The year when he introduced a gold, silver, or copper statue, or a throne, or precious emblems, or metal bulls or lions. The year when he dug a canal, gave his daughter in marriage, went to war, conquered cities, destroyed their walls or subdued tribes and nations.

The official date name on the more ordinary tablets was borrowed from larger chronicles kept up to date by the great scribe, the chief archive keeper. The book of the Chronicles of the Kings of Judah and Israel was preserved in the same way by Jewish tradition.

The name of the year on business documents may be longer or shorter according to the importance of the tablet, the leisure or the erudition of the scribe. A legal deed with oath and witnesses requires

more attention than a receipt for oil and barley. A daily beer and flour issue has not the importance of a twelve months accounting of the temple business. The dating may be reduced to one name, or it may develop into six or seven lines of text at the end of the tablet. Different examples of the same date may show grammatical variants, or may prove a tendency to substitute the name of the local god for that of the god of the neighbouring city. Local pride and independence at Ur honoured the Moon god Sin-Nannar above the Sun god of Larsa, or Ishtar of Erech. In any case, it is from such pieces of information patiently and carefully collected, that history is finally reconstructed.

The last year's campaign at Ur of the Chaldees has revealed a good many new dates, or new readings of known dates. They mainly concern Ibi-Sin the last independent king of Ur, about B.C. 2100, Lipit-Ishtar of Isin, about B.C. 2000, and the kings of Larsa: Gungunum, Abisarê, and Sumuilu. A badly mutilated fragment of a chronological list covered the reigns of Sin-eribam, Sin-igisham, Ṣilli-Adad, Warad-Sin and Rim-Sin, probably to the end of the Larsa dynasty and the conquest of the south by the Babylonians under King Hammurapi. On the 11th year of Samsuiluna, his son and successor, the walls of Ur and Erech were destroyed and with them the political independence of Sumer. In the subdued cities the Sumerian scribes kept compiling dates and chronicles and preserving the records of the past.

Of the twenty five years of reign of King Ibi-Sin, only the names of three or four have been heretofore known. Fourteen more have been recovered in the Ur excavations and are given here. While their chronological order is not yet fixed, we may give free play to imagination and picture for ourselves the course of events and the tragic story of King Ibi-Sin. For Ibi-Sin, the last of his race, was a tragic character. His name is associated with misfortune. His was the task to preserve the traditions of four preceding kings who made of Ur the capital of the East from Syria to the Persian gulf, a head market and harbour, who had raised high the brick tower of the Moon god, built his great shrine, where his metal statue was enthroned, also the shrine and house of the Moon goddess, the treasure house, the priests' house, the palace: who had surrounded the temple and the city with powerful brick walls mountain high. Ibi-Sin failed in that task. He could not defend the borders of his kingdom overrun by Amorite tribes from the southwest, and Elamites from the east. The Museum

preserves several original despatches of Ibi-Sin to his general the patesi of Kazallu, on the frontier, ordering him to stand his ground while he will follow with heavy troops. Ibi-Sin complains that the great Sumerian god Enlil of Nippur has betrayed the Sumerian cause and the King of Ur in favor of a foreigner, a Semite from Maer, Ishbi Irra, who will eventually become his successor and the first king of Isin.

The new date names show clearly the constant care of King Ibi-Sin for rebuilding the walls of Nippur and Ur, the two main fortresses of the kingdom. Three years in succession were named after that great event.

No less important is the first official mention of the Amorite tribes as coming, not from any powerful kingdom in the northwest, but from the south or southwest, and being purely nomades who never knew a city. The best modern parallel to that historical fact is supplied by the tribesmen of Ibn Saud overrunning the Iraq frontier. The text reads:

> " Year when unto Ibi-Sin the king of Ur, the Amorites, a southern tribe (troop) that never knew a city, did submit."

But the Amorites were only an incident in the war records of Ibi-Sin. Several centuries had to elapse before they would grow to any significance and importance under their sheikhs and kings of Babylon. The Elamites and other tribes of the eastern regions beyond the Tigris were the real enemy. Against them Ibi-Sin kept fighting, apparently with some success till the land was invaded, Ur the capital was stormed, the temple of the Moon god was plundered and destroyed, Ibi-Sin himself and many of his people were taken prisoners to Elam. These disastrous events are not recorded in date names, we know them only through later chronicles. But victory on Simurum, and an extensive campaign against Shushan, Adamdun and the land of Awan, seem to have placed the eastern bank of the Tigris for a while under the sway of Ibi-Sin.

> " Year when Ibi-Sin, the king of Ur passed like a storm
> over Shushan Adamdun and the land of Awan.
> On the bank of the great river(?) unto his lordship (?)
> he caused them to abide."

The rest of the new dates are of a more peaceful and pious character. They record the investiture with a priestly dignity of

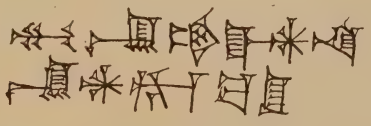
the great bull of heaven, the construction of a harp for the goddess Innina, the building of a treasure house the pure Eginabtum, the construction of the divine seat of the Moon god, of a statue of the same called "the heavenly leader," of the sublime throne of Enlil of Nippur, the marriage of the king's daughter to a patesi of Zabshali.

For such pious deeds the Moon god looked favourably unto his beloved servant Ibi-Sin. The Tigris overflowed. And even today there is no more important event in the whole South Babylonia. The yearly crop and the life of many thousands depend entirely on a good, regular inundation. The irrigation problem is all in the hands of the gods and of a provident government.

A hundred years after the disastrous end of Ibi-Sin, Ur, released from Elamite invasion, was under the rule of Lipit-Ishtar king of Isin, a city west of Nippur. The same old system of dating prevailed. Only the name of the king was new, and was faithfully accepted by the Sumerian scribe at Ur, till a new power arose in Larsa strong enough to overrule the king of Isin. From king Gungunum to the end of the Larsa dynasty Ur was a part of the Larsa dominion, and ignored the king of Isin. History teaches that the kingdom of Isin was absorbed by Larsa, and Larsa in turn was absorbed by Babylon, till there was only one united land under one great king of Babylon, a Semite of Amorite descent.

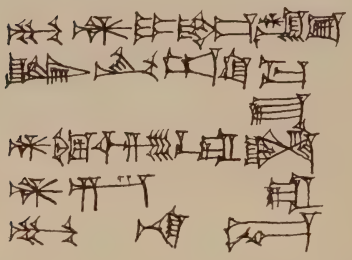
From King Lipit-Ishtar we recover four date names recording the establishment of peace in Sumer and Akkad, the construction of the golden throne of the goddess of Isin, and the investiture of the king with a priestly dignity at Ur.

From the kings of Larsa, Gungunum and his successors, we find many variant readings of known dates. They are listed below in chronological order, with a few unidentified dates. All tablets bear for the present only the field catalogue number. U = Ur.



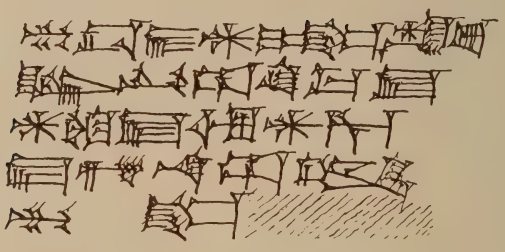
1. *mu en-am-gal-an-na*
   en ^{d}*ninni ba-ḫun-*[*gà*]

Year when the priest of the great Bull of Heaven
the priest of Innina was invested.
U. 6399.



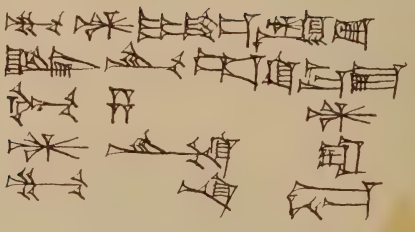
2. *mu* ^{d}*i-bi-*^{il}*sin*	Year when Ibi Sin
lugal urí^{ki} *ma-ge*	king of Ur,
^{d}*nin-igi-zi(d)-bar-ra balag*	Ninigizibarra the harp
^{d}*ninni-ra*	for Innina,
mu-na-dím	he made.

U. 6378.



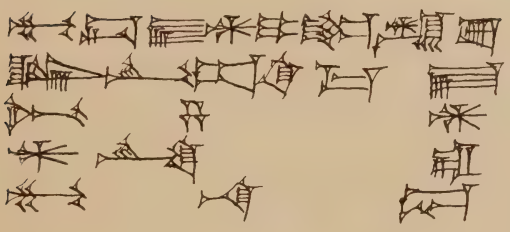
3. *mu-uš-sa* ^{d}*i-bi* ^{il}*sin*	Year after that Ibi Sin
lugal urí^{ki} *ma-ge*	king of Ur
^{d}*nin-lil ù* ^{d}*ninni*	unto Ninlil and Innina
é-gi-na-ab-tùm azag	built (or restored?) the pure
mu-ne-[ ]	Eginabtum

U. 6716.



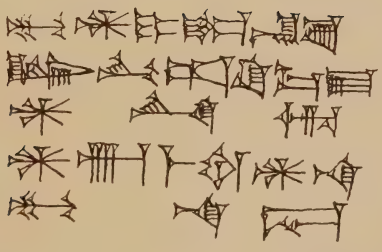
4. *mu* ^{d}*i-bi* ^{il}*sin*	Year when Ibi Sin
lugal urí^{ki} *ma-ge*	king of Ur.
gu-za an	made
^{d}*nannar-ra*	for Nannar
mu-na-dím	the celestial throne.

U. 6369.



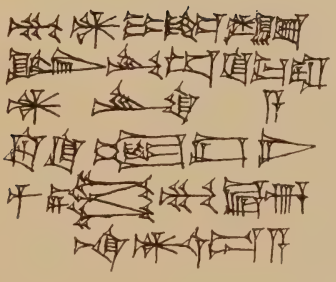
5. *mu-uš-sa ^{d}i-bi ^{il}sin*	Year after that...
lugal-urí^{ki} ma-ge	
gu-za an	
^{d}nannar-ra	
mu-na-dím	

U. 6370.



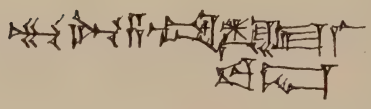
6. *mu ^{d}i-bi ^{il}sin*	Year when Ibi Sin
lugal urí^{ki} ma-ge	king of Ur
^{d}nannar-ar	made
^{d}gašam an-na	for Nannar
mu-na-dím	" the divine leader of heaven " (a statue)

U. 6373.



7. *mu ^{d}i-bi ^{il}sin*	Year when for Ibi Sin,
lugal urí^{ki} ma-ra	the king of Ur,
^{d}nannar-a	the beloved
ša(g) ki-ág-gà-ni	of Nannar
idigna mu-un-na-an-è-a	the Tigris overflowed.

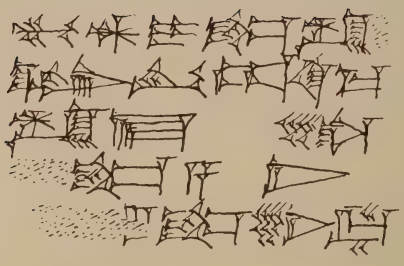
U. 6368.



8. *mu gu-za-maḫ* ^{d}*en-lil-lá*
ba-dím

Year when was made
the sublime throne of Enlil

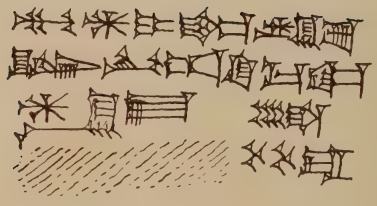
U. 6729.



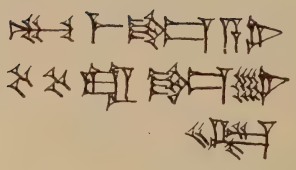
9. *mu* ^{d}*ibi* ^{il}*sin*
lugal- urí ^{ki}*ma-ka*
^{d}*en-lil-li*
me-lám-a-ni
kur-kur-ra
ne-in-šudun

Year of Ibi Sin
king of Ur, when
Enlil
subdued
the countries
(through) his splendor.

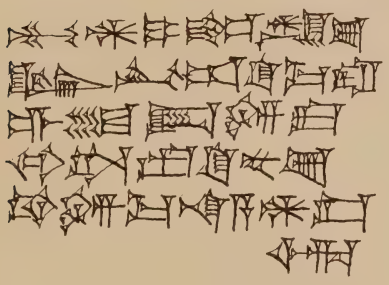
U. 2962.



10. Id.—U. 6[illegible]



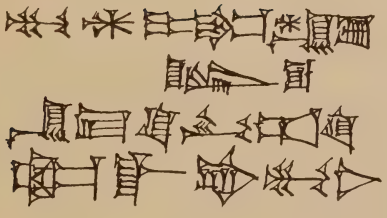
11. Id.—U. 63[illegible]74



12. *mu ^{d}i-bi ^{il}Sin*
lugal urí^{ki} ma-ra
mar-tu á-im-gâl
ul-ta uru^{ki} nu-zu
gú im-ma-na-ám-gà-ar

Year when unto Ibi Sin
king of Ur
the Amorites a southern tribe
that never knew a city
submitted

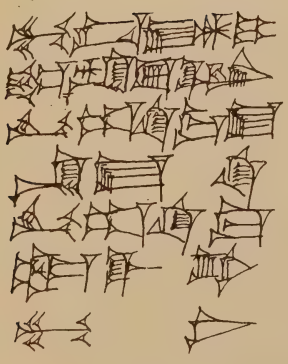
U. 6372.



13. *mu ^{d}i-bi ^{il}sin lugal-e*
nibru^{ki} urí^{ki} [*ma*]
bád-gal-bi mu-dū

Year when Ibi Sin the king
built the great walls
of Nippur and Ur.

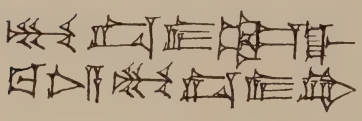
U. 6700.



14. *mu uš-sa ^{d}i-bi ^{il}sin*
lugal-urí^{ki} ma-ge
nibru^{ki} urí^{ki} ma
bád-gal-bi mu-dū

Year after that Ibi Sin
the king of Ur
built the great walls
of Nippur and Ur.

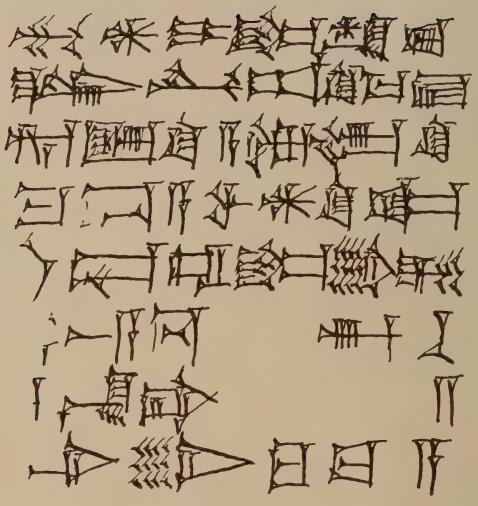
U. 2992.



15. *mu-uš-sa bád-gal*
ba-dū-a mu-uš-sa-bi

Year after that the great wall
was built. The following year.

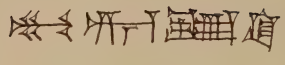
U. 6701.



16. *mu* ^{d}*i-bi* ^{il}*sin*
lugal urí^{ki} *ma-ge*
šušan^{ki} *a-dam-dun*^{ki}
ma-da a-wa-an^{ki} *ka*
ud-dím ra(?)ne-in-gí
[*gú*] *íd nun* [ ]
[*nam*]*-en-bi a*
[*i*]*-ni-in-tuš-ba-a*

Year when Ibi Sin
king of Ur,
like a storm passed over
Susa, Adamdun
and the land of Awan,
on the bank of the great river.
unto the lordship...
had them to abide.

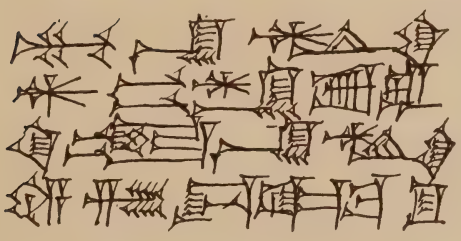
U. 6725.



17. *mu šušan*^{ki}

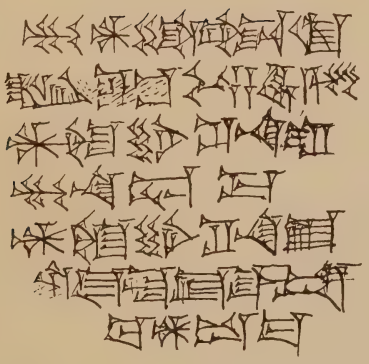
Year when Susa.

U. 6377.



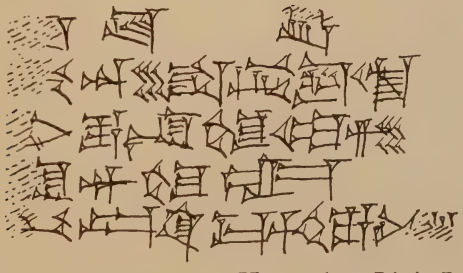
18. *mu en* ^{d}*nannar*
^{d}*bur* ^{il}*sin-ra*
ki-ág en ^{d}*nannar*
kar-zi(d)-da-ka ba-ḫun

Year when the priest of Nannar
the beloved of Bur Sin
was invested priest of
Nannar of Karzida.
7th year of Bur Sin—U. 6731.



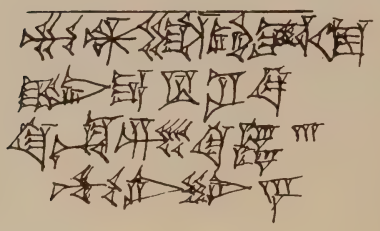
19. *mu* ^{il}*li-bi-it-ištar*
lugal-e giš-gu-za guškin
^{d}*nin in-si-na*[^{ki}] *ra*
mu-na-dím-ma
^{d}*nin-in-si-na-ge*
ša(g)-ḫul-la é-gal-maḫ
ba-an-gub-ba

Year when Lipit-Ishtar
the king—made
a throne of gold
for Nin-isin and
Nin-isin stood in
the (house?) joy of her heart
in the great palace
U. 2625.



20. *mu* ^{il}*li-bi-it-ištar*
lugal-e en-nin-sun-zi(d)
en ^{d}*nin-ezen*
[ ] *urí*^{ki} *ma máš-e-ni-pa(d)*

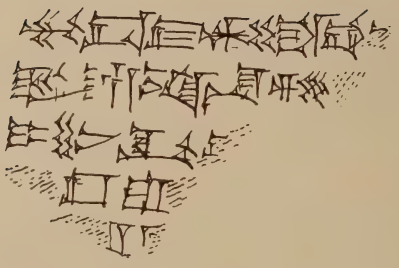
Year when Lipit-Ishtar
the king was elected by sigr
as pure priest of Ninsun
priest of Nin-ezen at Ur.
U. 2596.



21. *mu* ^{il}*li-bi-it-ištar*
lugal-e nig-si-sá
ki-en-gi ki-uri
mu-ni-in-gar

Year when Lipit-Ishtar
the king established
order in Sumer
and Akkad

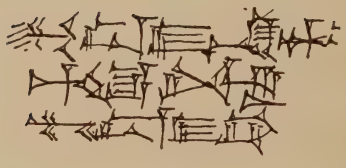
U. 2548.



22. *mu uš-sa* ^{il}*li-bi-it* [*-ištar*]
lugal-e erim(?) *ki-en-gi* [ ]
i-in-gál-la [ ]
[ ] *gà-ra* [ ]

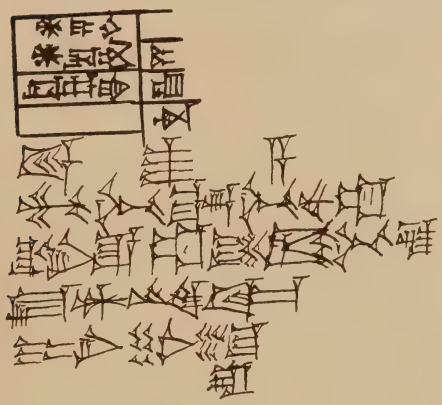
Year after that Lipit-Ishtar
the king, the soldiers(?) being
in Sumer....
he...

U. 2647.



23. *mu-uš-sa en* ^{d}*babbar*
máš-e-ni-pa(*d*)
mu-uš-sa-bi

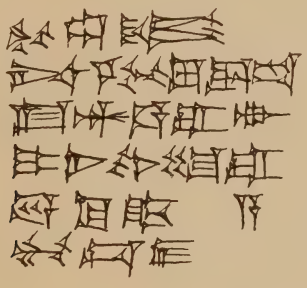
Year after the priest of Babbar
was elected by signs.
The following year.
8th year of Gungunu. U. 2699.



24. *mu gu-un-gu-nu-um*
lugal-e ^{urudu}*alam-gu-la*
é ^{d}*nannar-ka*
i-ni-in-tù(r)-ra

Year when Gungunu
the king introduced
the great bronze statue
in the house of Nannar.
8th year of Gungunu. U. 2682.

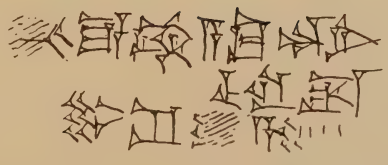
Seal impression of a scribe servant of king Idin-Dagan.



25. *mu* ^{urudu}*alam*
^{dag}*nig-gu-lu-da-ta*
é ^{d}*babbar-ra ag*
i-ni-in-tù(r)-ra
. . . . .
mu-uš-sa

Year when the bronze statue
inlaid with . . . . stones
was introduced in the
house of Babbar.

The following year.
9th year of Gungunu. U. 6381.

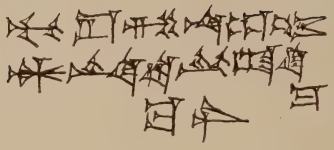


26. *mu e-gú íd an-ni-pa(d)-da*
in-si(g)-ga

Year when he cut the irrigation
trenches of the canal Annipada.
15th year of Gungunu. U. 2584.

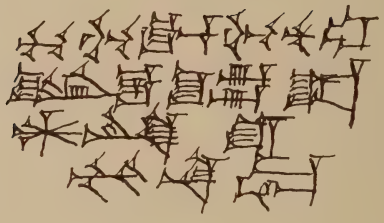
27. *mu bád-gal arar*^{ki} *ba-dū*

Year when was built the great wall of Larsa
21st year of Gungunu. U. 6382.



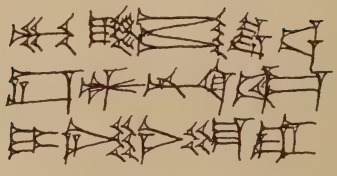
28. *mu é-gi-na-ab-tùm* [*azag*] ^{d}*nannar ša(g)urî*^{ki} *ma ba-dū*

Year when was built the pure Eginabtum of Nannar
at Ur.
25th year of Gungunu. U. 6383.



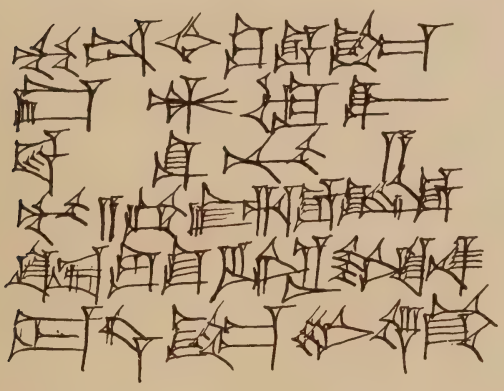
29. *mu gu-un-gu-nu-um lugal-e šu-nir*(?) *kù-babbar* ^{d}*nannar-ra mu-na-dím*

Year when Gungunu
made for Nannar
a silver emblem(?)
26th year of Gungunu. U. 6724.

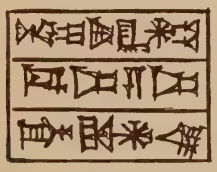


30. *mu alan kù-babbar é* ^{d}*nannar-ka i-ni-in-tù*(*r*)*-ra*

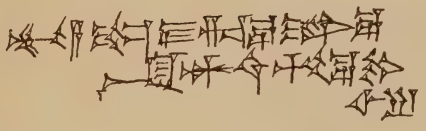
Year when he introduced
in the house of Nannar
a silver statue.
3rd year of Abîsarê. U. 6386.



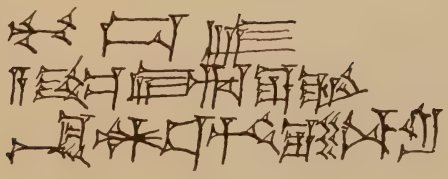
31. *mu a-bi-sa-ri-e lugal-e* — Year when king Abî-sarê
ugnim i-si-in^{ki} *na* — battled against the
giš kàr(?) *ne-in-sīg-ga* — troops of Isin.
9th year of Abîsarê. U. 6730.



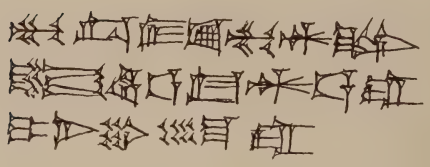
32. Seal impression on a tablet dated on the same year.
lù ^{d}*nin-sun* — Lu Ninsun
ab-a-ab-da — the abaabda
dumu ^{il}*sin-i-din-na* — son of Sinidinna
U. 6710.



33. *mu a-bi-sa-ri-e lugal-e* — Year when Abî-sarê the king was
en ^{d}*babbar máš-e-in-pa*(*d*) — elected by signs priest of Babbar.
10th year of Abîsarê. U. 6384.

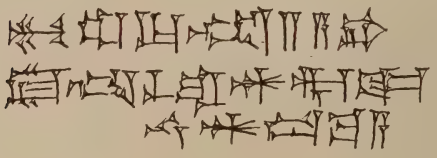


34. *mu uš-sa a-bi-sa-ri-e lugal-e* — The following year.
en ^{d}*babbar máš e-in-pa*(*d*) — 11th year of Abîsarê. U. 6385.



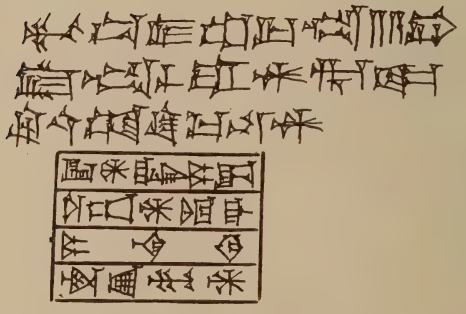
35. *mu uš-sa su-mu-ilu lugal*
alan kù-babbar é dbabbar-ra
i-ni-in-tù(r)-ra

Year after that Sumuilu, the king,
introduced a silver statue
in the house of Babbar.
3rd year of Sumuilu. U. 6387.



36. *mu urudu-ur-maḫ min-a-bi*
ká-maḫ bar-ra dninni-ka
na-an-gub-ba-a

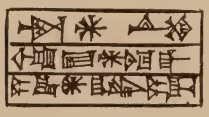
Year when the two copper
lions were placed at the great outer
gate of Innina
3rd year of Sumuilu. U. 6388.



37. *mu uš-sa urudu-ur-maḫ min-a-bi*
ká-maḫ bar-ra dninni-ka
ša(g) arark[i] ma na-an-[gub-ba-a]
Seal impression of
azag dlugal-ban-da
.....éš dnin-gal
dumu na-di
arad su-mu-ilu

The year after the two
copper lions were placed at the
great outer gate of Innina in Larsa.

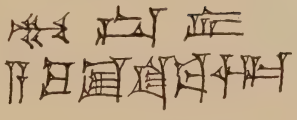
Azag Lugalbanda.
priest of prayers at the shrine of Ningal
son of Nadi
servant of Sumuilu.
4th year of Sumuilu. U. 6389.



38. Seal impression of his son.

arad ^{d}*nannar*	Arad-Nannar,
agrig é ^{d}*nin-gal*	diviner of the house of Ningal,
dumu azag ^{d}*lugal-ban-da*	Son of Azag Lugalbanda.

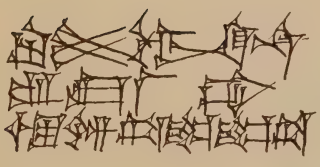
U. 6708.

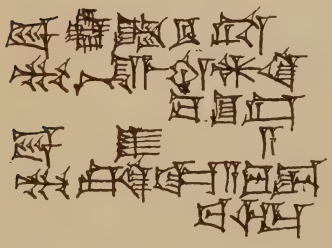


39.

mu uš-sa	Year after
a-ku-zu^{ki} *ba-ḫul*	Akuzu was destroyed.

5th year of Sumuilu. U. 6391.

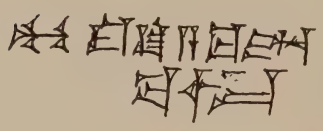




40. List of valuable goods: gold, copper, semi-precious stones, wood, ivory brought from the island of Dilmun to the temple of Ningal after two years' expedition.

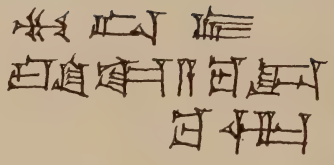
ša(g) kaskal dilmun^{ki} *na*	From the Dilmun expedition
má-gâl-lal-bi	its cargo,
ù im-ta-ne-ne-ta	and the documents thereof.
é ^{d}*nin-gal*	Temple of Ningal.
itu bár-zag-gar	Month of Barzaggar
mu en-me-te an-ki(?) *ba-ḫun-gà*	year when the priest ornament of heaven and earth (?) was invested
itu áš-a	(to) the month of Asha
mu uru-ki ka íd-da ba-ḫul	year when the city of Pî-nâri was destroyed.

6th to 8th year of Sumuilu. U. 6709.



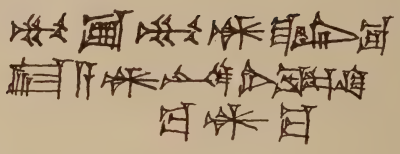
41. *mu uru-ki íd-da*
ba-ḫul

Year when the city of [Pî-]nâri
was destroyed.
8th year of Sumuilu. U. 6390.



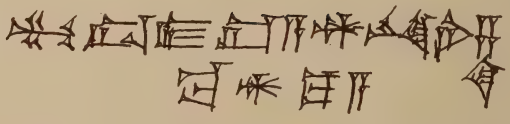
42. *mu uš-sa uru-ki ka-íd-da*
ba-ḫul

Year after that the city of Pî-nâri
was destroyed.
9th year of Sumuilu. U. 6392.



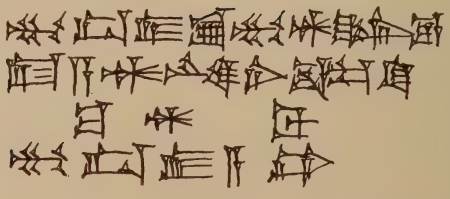
43. *mu su-mu-ilu lugal-e*
é-a ^{d}*nannar ni-šá(g)-ki*
ba-an-tuš

Year when king Sumuilu
let the priests (the offerings?)
inhabit the house of Nannar.
14th year of Sumuilu. U. 6393.



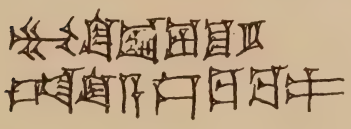
44. *mu uš-sa é-a* ^{d}*nannar*
ni-za-ki ba-an-tuš-a

Year after in the house of Nannar
he let the priests inhabit.
15th year of Sumuilu. U. 6395.



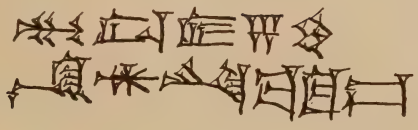
45. *mu uš-sa su-mu-ilu lugal-e*
é-a ^{d}*nannar ni-šá(k)-ki*
ba-an-tuš
mu-uš-sa-a-bi

Year after King Sumuilu
let the priests inhabit
the house of Nannar.
The following year.
16th year of Sumuilu. U. 6394



46. *mu ugnim*
unu(g)^{ki} a giš-tukul ba-sīg

Year when the army.
of Erech was defeated by arms.
22nd year of Sumuilu. U. 6396.

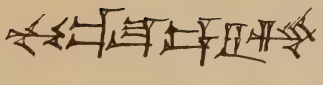


47. *mu uš-sa 5 kam*
en ^{d}nannar ba-ḫum-gà

The year after the fifth
since the priest of Nannar was invested.
28th year of Sumuilu. U. 6397.

48. *mu bád urî^{ki} ma*

Year when the wall of Ur.
Year of Warad Sin (f) or Samsuiluna.
U. 6712.

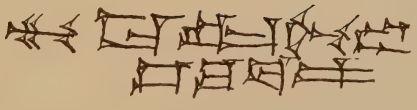


49. *mu giš-šu-nir guškin*

Year when the golden emblem.
Year of Gungunu or Samsuiluna?
U. 6713.

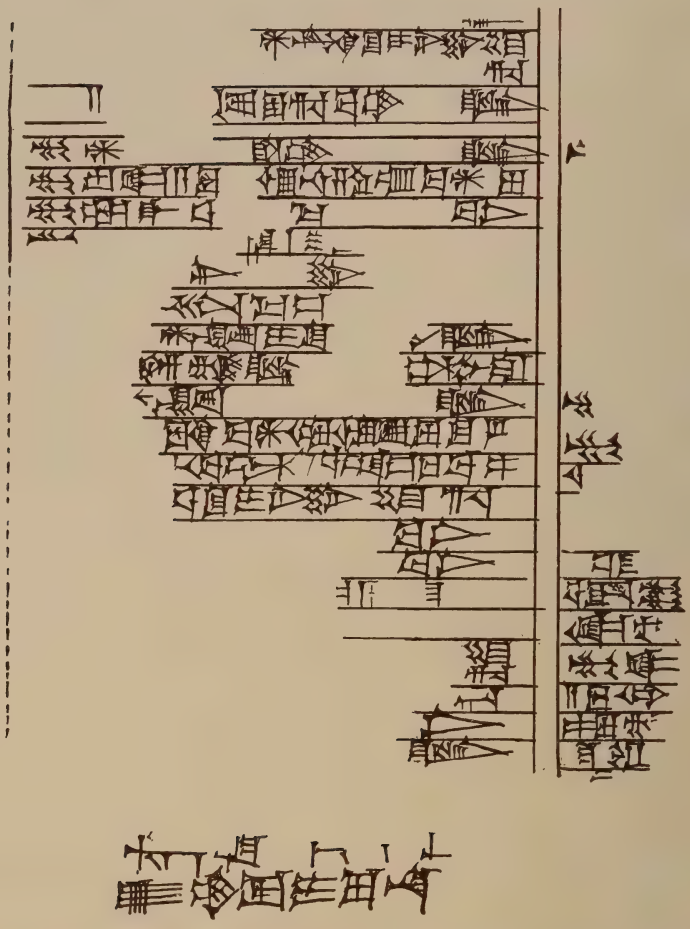
50. *mu é-šu-kàr ki-na*(?)
ba-an-tuš

Year when Eshukar kina
was inhabited.
The ziggurat of Ur (cf. Br. 7131.)
U. 6714.



51. *mu ma-al-gu-um*
giš-tukul ba-sīg

Year when Malgum
was defeated by arms.
Warad Sin, Rim Sin, or Hammurapi?
U. 6727.



52. Fragment of chronological tablet. Middle portion of the I col. of the obverse (?) including the reigns of Sineribam, Siniqisham, Ṣilli-Adad and Warad-Sin.

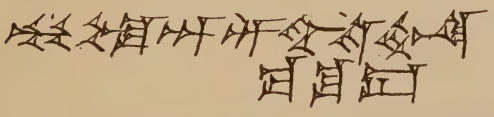
A few signs of the II col. cover the 22nd and 23rd years of Rim-Sin.

The reverse had probably a list of the other years of Rim-Sin, who reigned thirty-eight years more before being defeated by Hammurapi. The present tablet may have been compiled under the reign of Samsuiluna, whose name is read on a loose but very similar fragment.

[*mu* ^{il}*sin-e-ri-ba-am*] *lugal*	Year when Sineribam was king
[*mu*] *é* ^{d}*nannar šú*	Year when he introduced.....
i-ni-in-tù(r)-ri	in the house of Nannar
2 [*mu*^{il}] *sin-e-ri-ba-amlugal*	2 years of king Sineribam.
mu ^{il}[*sin-i-ki*]-*ša-am lugal*	Year when Siniqisham was king.
mu uru-ka-íd-[*da*] *ù na-za-ru-um ba-an-dib*	Year when the cities of Pinâri and Nazarum were captured.
mu bád-gal a[*rar*^{ki}]-*ma ba-dū*	Year when the great wall of Larsa was built.
[*mu*] *šu in* [ ]	

	[*mu*]-*ni in* [ ]	
	[*mu*]-*ti nim-ma giš* [ ]	
	[*mu*] ^{il}*sin-i-ki-*[*ša-am*]*lugal*	[ ] years of king Sin-iqisham.
	[*mu ṣi-lí* ^{il}] *adad nam-lugal* [ ] *ta-gar?ra*	Year when Ṣilli-Adad was...king.
	[*mu* ^{il}*warad*] ^{il}*sin lugal*	Year when Warad Sin was king.
	[*mu*]-*lu*^{ki} *ba-an-gul ù ugnim* [..]	Year when ... was destroyed and the troops
	[ ]..*ba-tum? ša*(*g*) *arar*^{ki}*giš tukul ba-sīg*	of .... in Larsa were defeated by arms.
	[*mu* ^{d}] *babbar-šú i-ni-in-tù*(*r*)*-ri*	Year when....was introduced in the temple of Babbar.
	[ ]*-ba-dū*	Year..... was built.
	[ ]*-ba-dū*	Year.... was built.
	[ ]	Year.... ..
	[ ]	....
	[*mu*] *tù*(*r*)*-ri*	Year was introduced.
	[*mu*] *tù*(*r*)*-ri*	Year was introduced.
	[*mu* *ba*]*-dū*	Year was built.
	[*mu*] *lugal*	Year ..the king.
Col. II.	[*mu*] *giš tukul*[*kal-ga*]	Rim-Sin Year 22.
	e-rim á-taḫ-bi [*šu-ni*]	
	ugu nam [*-lù-gál-bi*]	
	mu dú(*g*)[*ga zi*(*d*)*-da*]	Rim Sin Year 23.
	íd ul[*ta mu-bi*]	
	sib-zi(*d*) [	
	íd el-[*la*	

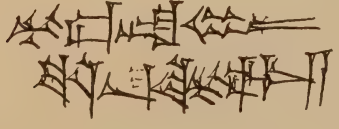
U. 6958.



53. *mu nin-dingir* ^{d}*ní-te-en*(*?*)*-na* or ^{d}*Adad te-im-ki ba-hun-gà*

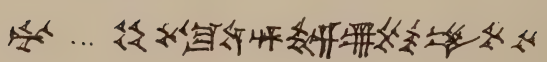
Year when the priestess of... was invested.
Grave 46 with other tablet dated of Samsuiluna year 11.

U. 6314.



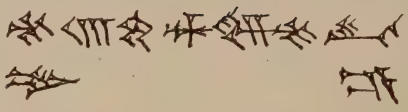
54. *mu é-maḫ-gig-pár ?* *ša*(*g*) *arar*^{ki} *mu-um dū-a*

Year when he built in Larsa the *Emahgigpar*
+Seal impression. U. 4954.



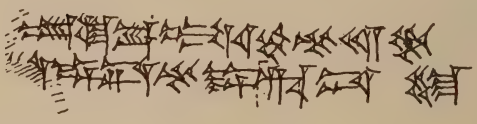
55. *mu.... ^{il}nergal ú-še-zib*
šar matâti

Year...of Nergal-ushezib (Adad)
king of the countries
(B.C. 693) U. 6322.



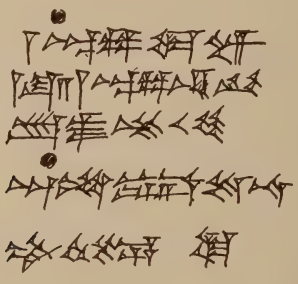
56. *mu 13 kam ^{il}Adad-šum-naṣir*
šar babili

Year 13th of Adad-shumnàsir.
(B.C. 1234) King of Babylon.
U. 6715.



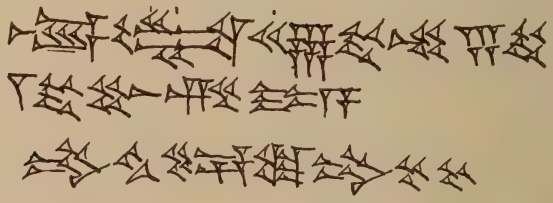
57. *urí^{ki} arḫi kislimu ûm 11^{kam} šatti 22^{kam}*
[^{il}mar]duk-apal-iddin mar-ri-du-tu

at Ur, Kislimu, the 11th on 22nd year
of Marduk-apaliddin the legitimate son.
About B.C. 700. U. 2616.



58. *^{il}Nabù-usallim*
ana qât ^{il}Nabû-bêl-uṣur
^{warah}šabat ^{šatti} 10^{kam}
^{il}Marduk-apal-iddin-na
šar-babili

Nabu-usallim
into the hands of Nabû bêl-uṣur
Month of Shabat, 10th year
of Marduk-apalidinna
king of Babylon.
About 711 B.C. U. 2662.



59. *^{warah}simanu ^{um}29^{kam} šatti 5^{kam}*
kam-bu-zi-ia
šar babili šar matâti

Simanu the 29th 5th year
of Cambyses
king of Babylon, king of the countries.
B.C. 524. U. 2585.

A COLLECTION FROM THE CROW INDIANS

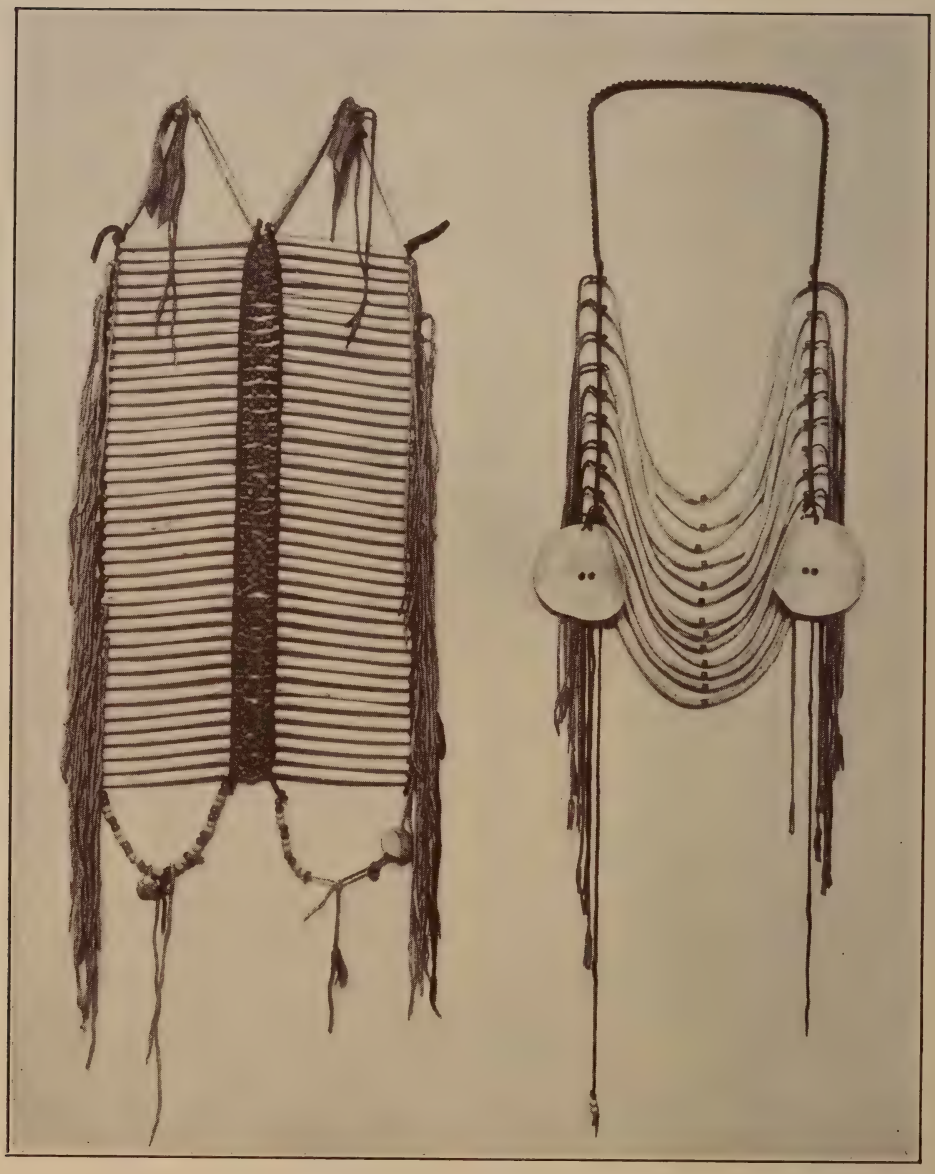
By J. Alden Mason

AMONG the Indian tribes of our Great Plains, those buffalo hunting, tipi inhabiting, feather bedecked, upstanding warriors who to us have always represented their race, none ranked higher than the Crow, or, as they termed themselves, the Absaroke, a native word of the same signification.

Although numerically not a large tribe, probably at no time exceeding four thousand persons, they held by dint of their warlike prowess an immense territory against the attacks of the larger hostile tribes which ringed them about. They claimed as theirs and roamed over a tract east of the Rockies which included most of the state of Montana and a part of Wyoming, a vast stretch for so few people, and one which teemed with bison and elk.

The Crow were therefore a proud and wealthy people, reveling in hunting and warfare and despising the sedentary life. Although native legend, corroborated by scientific research, indicates that the Crow broke away from the Hidatsa, a sedentary, partly agricultural people living in permanent villages further to the east, not more than two centuries ago, the Crow became a typical buffalo hunting tribe of the Great Plains. At the present time they number no more than eighteen hundred and are confined to the relatively small area of the Crow Reservation, where they retain memories of the time when buffalo and elk swarmed over the country and the Dakota, Blackfoot, Cheyenne, Arapaho, and Shoshoni warriors gave the young brave his chance to win the honors of battle. The Crow developed no bitter animosity toward the whites as the result of barbarous treatment and broken treaties. Their territory lay rather out of the main channels of transcontinental migration and their land was not especially adapted to agriculture and therefore not speedily overrun and appropriated. Beyond stealing horses and other equipment from emigrants—always a laudable deed in Indian eyes—no massacres of settlers are reported against them and only one trivial difficulty with federal soldiers. There was never any attempt to move them far from their ancestral home and they now occupy a reservation within the bounds of their former hunting grounds.

The old culture of the Crow is rapidly disappearing, the wooden house is taking the place of the tipi and the tractor that of the horse.



Bone Breast Ornaments worn by Crow Indian Men.

The younger generation takes little interest in the costumes, the ceremonial objects and the other material evidences of the older culture, objects which are gradually disappearing and will never again be made. These old properties of the tribe are represented in a collection recently secured by the Museum from Mr. Ernest E. Murray of Billings, Montana.

Physically the Crow were and are magnificent specimens of humanity, ranking among the tallest people in the world. The average height for the men is not far from six feet and some reach a height of six feet four inches and even more. They are for the greater part slim but powerfully built and consider a straight nose and small hands and feet essential to physical perfection.

In earlier days the clothing was made entirely of skins, generally of elk hide, though hides of buffalo and mountain sheep were also utilized and all apparel was profusely decorated, so that the Crow, especially the men, became noted among the prairie tribes for the beauty of their trappings. Breechclout, leggings, shirt, moccasins and buffalo robe were the primary elements of man's apparel, but these only served as a base for the profuse ornamentation which was applied to them and worn over them, consisting of bead and porcupine quill embroidery, feathers, dyed horsehair, and objects of bone, teeth, claws and many other materials. The employment of porcupine quill embroidery is, of course, the elder art, work in glass beads being, despite their great present vogue, a development of hardly more than the last century, although the designs employed are taken over from the older technique. Both arts were practised exclusively by the women. Beadwork embroidery was formerly accomplished by the use of sinew, but today thread and needle are employed, the beads being strung on thread and then attached to the background with many stitches. Solid areas of beading are typical, in which geometric and normally rectilinear designs are placed.

According to tradition, Crow moccasins were originally made of one piece of tanned hide, according to the technique of the woodland tribes, but the modern Crow have evidently been greatly influenced by the other tribes of the prairies in their moccasin technique. The typical Plains moccasin is made in two parts, with a separate rawhide sole and uppers of soft tanned skin. The Crow moccasins illustrated on page 401 are made with a separate sole, but this is of soft tanned elkskin instead of the typical rawhide. The upper part is made of four separate pieces of tanned elkhide, the

upper and the flap being each of one piece with a small piece inserted at the back and another small piece for the tongue. Thongs of thin strips of elkskin are attached with which to bind the flaps around the ankle.

Crow moccasins are profusely decorated on the vamp and along the border of the sole with beadwork. The designs employed are most commonly rectilinear and geometric, but of recent years the curvilinear floral designs, which are more typical of the woodland tribes such as the Ojibway and Cree, are becoming increasingly popular among the Crow. Such is the design on the moccasins here figured.

Apparently the most typical and popular ornament of the Crow man, if one may judge from photographs of warriors of the tribe in full regalia, is a breast ornament such as that illustrated on page 394. This consists of a number—in the present specimen, thirteen—of pendent loops of thin discoidal bone beads strung on buckskin thongs carefully twisted to a circular section. These bone disks are so numerous and of such uniform size and thickness that it seems probable that they are or were made in large quantities by machinery in some city and sent to the Indian reservations for sale, just as is the case with the glass beads which are regarded as so typically Indian. In all such cases the modern product replaces an older one which the Indians in earlier days manufactured laboriously. Occasional large green glass beads are interspersed among the bone disks of this specimen. The buckskin thongs on which the disks and beads are strung pass through the vertical side pieces, which are of commercial leather, and hang down on either side as tassels, the neckband being also of a thin strip of leather. The ensemble is completed by two large concave disks of pink seashell.

Another breast ornament which is very popular among certain tribes of the Great Plains, though not especially so among the Crow, is the other specimen figured on page 394. It is possible that it may have drifted to the Crows from another Plains tribe. This is practically a breastplate made of many parallel and closely set long tubular beads of bone. These are always arranged in two parallel columns, the present specimen having forty-one beads to each column. As in the case of the preceding specimen, these bone beads are so uniform and carefully finished and drilled as to suggest that they also are of commercial manufacture, sold to the Indians, although in earlier days they doubtless had an aboriginal prototype.

Dress of Crow Indian Girl, Decorated with Imitation Elk Teeth.

In the central column between the bone beads, large glass beads are found and all, as in the case of the preceding specimen, are strung on parallel horizontal buckskin thongs which perforate the leather supports to the sides and hang down outside as pendent fringes. To one end, twin loops made of large strung glass beads are found, their place being taken at the other end by the angles made by two of the long bone beads to either side.

In former days the woman's dress was made, according to various informants, of deer, mountain sheep or mountain goat skins, two entire hides being used for the dress, one to front and one to back, with the yoke made of a third smaller piece. These dresses were profusely decorated with elk teeth until they became extremely heavy, much too heavy for comfort, and were, of course, worn only on occasions of ceremony. Indeed, one of the indices of a man's wealth and importance was the number of elk teeth on his wife's and daughters' dresses. These attested his prowess as a hunter, and the great abundance of elk in the Crow region may be realized from the fact that although each elk affords only two tusks, dresses with over a thousand elk teeth have been known among the Crow. They passed also as a species of currency, a hundred of them purchasing a good horse. Yet no young Crow dared to think of marriage until he possessed enough elk teeth to decorate his bride's best dress.

Of later years, with the diminution of the Crow territory and the consequent practical disappearance of elk and other game upon the reservation, the elkskin and elk teeth dresses were necessarily superseded. Dresses of a cloth material known as stroud or stroud-ing became popular on the reservation, and most of the modern women's dresses are made of this cloth, either blue or red. The specimen secured with the Murray Collection and illustrated on page 397 is a child's dress of red stroud lined with muslin, the cuffs, hem and yoke being made of several varieties of blue cloth and edged with pink ribbon. The yoke is further decorated with beads. The dress is covered with imitation elk teeth, made of bone cut to the proper shape and sewed to the red stroud with string. These imitation elk teeth are used today on all women's dresses, and very closely resemble the genuine; in fact, many of them need close inspection to distinguish them from the genuine. Others, however, are rather rude. Owing to the irregular shape of the elk tusk, these cannot be turned out in bulk by machinery and are apparently cut

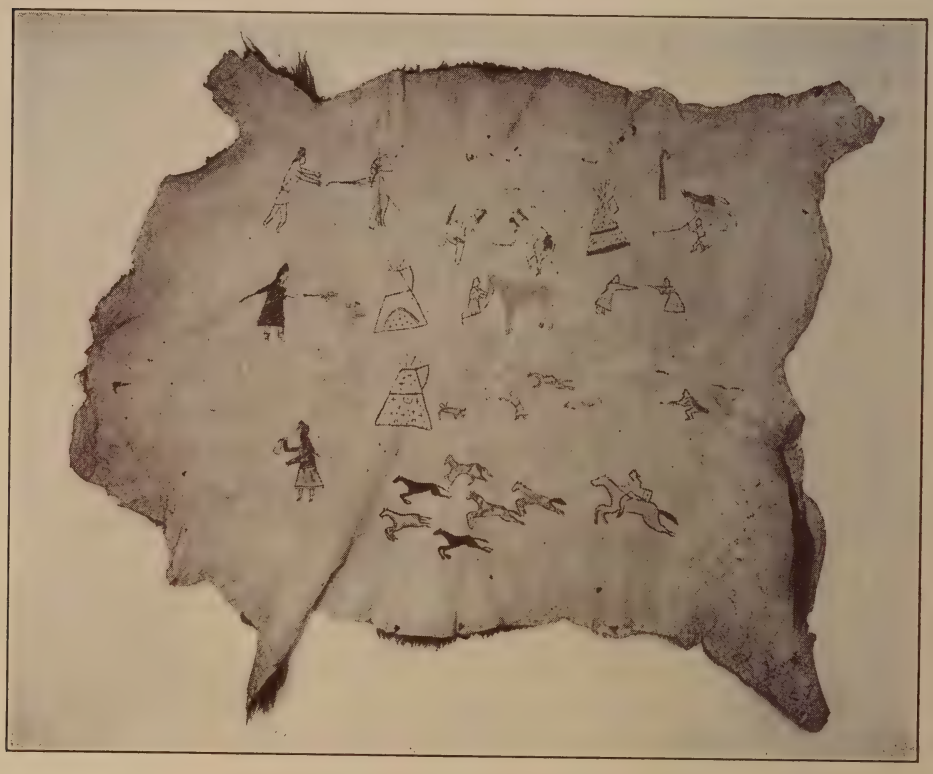
by hand, but whether this is done by the Indians themselves or by outside labor is not reported.

Robes made of buffalo hide, generally from a cow on account of the greater softness of the skin, were prized articles of apparel and of ornament among the Indians of the Great Plains, not only because of their warmth in the glacial winter days, but because their large expanse of even surface presented a medium for the expression of art such as was afforded by no other material within their knowledge. Buffalo robes were nearly always decorated to the full extent of the ability of the owner, and are consequently always valuable and prized articles, not alone to the native, but to the Museum. Often they are but highly developed examples of the same technique and artistic style which is found on rawhide bags and such smaller objects, but more frequently advantage is taken of the more extensive surface to elaborate a series of pictorial representations which serves as a portrayal, pictographic or mnemonic, historical or biographical, of events.

The majority of painted buffalo robes fall into the two classes of historical and biographical. To the former class belong the very interesting "Winter Counts" of the Dakota Indians, in which the historian records the most important event of the year. The symbols themselves are most interesting for students of the origins of systems of writing. The autobiographical records are generally more purely pictorial and less symbolically mnemonic; they were probably painted for self glorification, which to Indian psychology is perfectly proper and laudable, though even here there may have been the mnemonic idea in mind, a desire to record the important events of one's life so that none might be overlooked during the recitation of heroic adventures which was a feature of certain ceremonies.

A robe, apparently of the autobiographical type, was secured with the Murray Crow collection and is reproduced on page 400. While inferior in practically every respect to the admirable robe which was described in a recent issue of this JOURNAL, it is of considerable interest. The robe itself is evidently quite old, with thick brown wool, but the paintings on the interior are relatively recent. They are in bright unfaded colors and seem to have been made of aniline dyes mixed to a thick paste and applied thickly with a stick. The usual painting instrument on the Plains was a piece of spongy bone from the knee joint of a buffalo or ox. The colors employed

are dark blue, yellow, red, green and light blue. The scenes depicted are all martial and apparently all of intertribal warfare, there being no certain representations of soldiers or white civilians. Firearms are the sole weapons displayed, indicating that the period pictured is quite recent. The delineation of the human figure is not especially creditable, but the spirited portrayal of running horses indicates a keen observation and a thorough acquaintance with horseflesh. The assumption that the events pictured are autobiographical is based

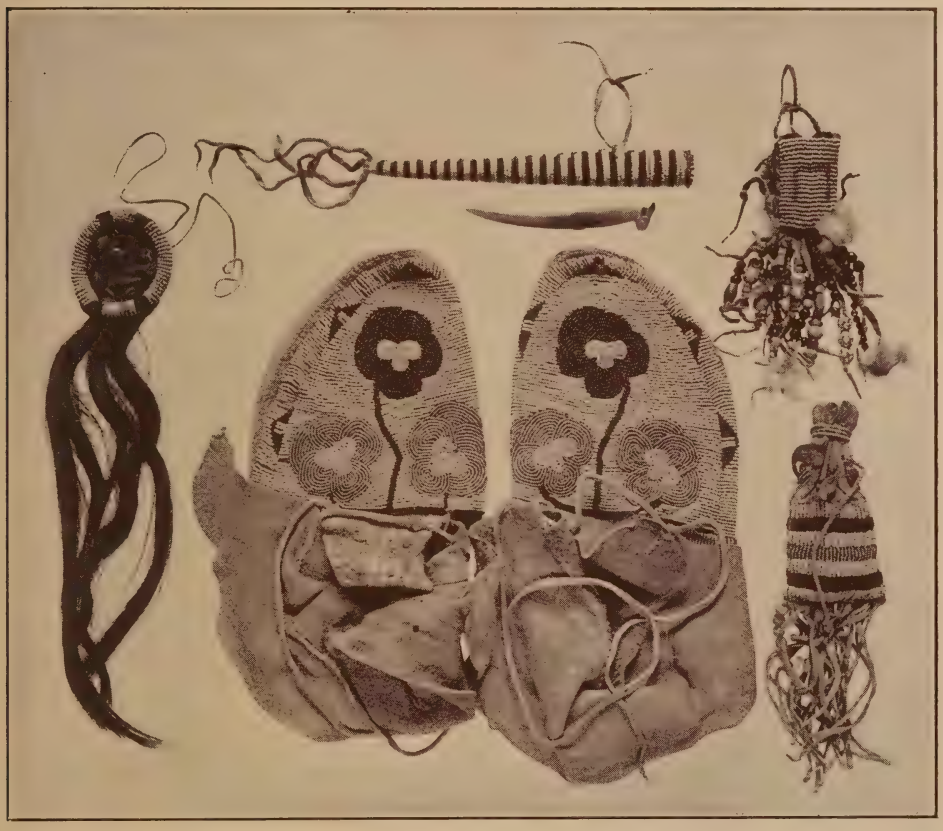


Crow Buffalo Robe Painted with Biographical Records.

on analogy with similar robes, it being by no means certain that the robe does not illustrate certain incidents of one or more battles or raids. Distinguishing individual characteristics of person or equipment are so few that it is impossible to distinguish the hero, if such there be, in even a majority of the adventures pictured. In four of the events a man dressed in a robe edged with red, yellow and light blue appears to play the prominent role, but in one of these incidents two men attired in this identical costume are shown shooting at each other. Apparently there is a primary division of the

paintings into superior and inferior halves and a less certain division of each of these into similar halves, making four rather indefinite tiers in which one may distinguish some ten different adventures.

Beginning at the upper left, the first two incidents pictured are in an artistic and technical style slightly different from the others, but probably done by the same hand. The figures shown here are generally clothed only in breech cloths and drawn only in outline.



Crow Indian Beaded Objects. Scalp, Pair of Moccasins, Paint-bag, Horse-stealing Medicine and Bone Painting Instrument.

In most of the other illustrations the figures are robed, horses and tipis play a prominent part, and many of the figures are filled in with color.

In the first group, a figure with a tailless war bonnet, red breech cloth and decorated blue leggings and with red paint on his face is seen shooting an unarmed Indian without distinguishing characteristics who advances with outstretched arms. Red paint on the forehead is one of the distinguishing characteristics of the Crow

according to accepted Plains symbolism. In the second group two semi-nude natives with blue breech cloths and red face paint, one of them armed with a lance or a coup stick with flying feather, shoot an armed native who displays yellow face paint. This yellow face paint is doubtless the distinguishing characteristic of a definite enemy tribe, the identity of which I have been unable to ascertain.

The third group portrays a figure whose long robe or gown gives him a feminine air, who cuts the rope of a picketed yellow horse while a red picketed horse stands nearby. This, as we shall see, is one of the feats most honored among the Crow. His robe is edged with red, yellow and blue, but the details of this coloring differ markedly from those of the other five figures. A tipi painted with daubs of red and yellow stands nearby. The smoke flap on this tipi has a different shape and setting from those of the other tipis and both this and the painted decoration may indicate the tribal affiliations which I have not been able to ascertain.

A large figure in blue begins the second row of drawings, here considered as group four. Although with the superficial appearance of a woman, with solid dark blue robe, leggings edged with red, green and yellow, and red paint on the forehead, the figure shoots a gun toward a tipi of a slightly different aspect. The top is slightly flatter, the base broader, and the smoke ear triangular instead of rectangular as in the preceding case. It is painted with a red, yellow and blue semicircle and some dots, and probably indicates a tipi of a different tribal pattern from the preceding. A small figure in a red dress, probably that of a child, is seen running from the tipi toward the large blue figure which obviously represents a Crow Indian.

In group five a man with an ornate robe bordered with red, yellow and light blue, a robe seen frequently in the following pictures, cuts a picketed yellow horse, thereby winning one of the four great war honors. But in the next incident two men, apparently both dressed in the same robe as that seen in the last group, shoot at each other at close range with no evident casualty.

The next group, the seventh, pictures the same varicolored robe shooting at a figure of unidentified sex dressed in blue, close to a tipi of the type of that last described, although the top is broader and only four poles are seen. It is decorated with horse tracks and crosses in blue, and yellow dots. The eighth group may be a second part of the preceding. Here a man with a red cloak has shot a man

entirely covered with yellow paint. The latter's red horse, apparently bearing a saddle of civilized manufacture, is running away.

The next figure, at the left of the last tier, may be a part of the final group, but is of disproportionate size. The individual is dressed entirely in blue with a solid red face, and may possibly represent a woman, inasmuch as she is not engaged in combat but walks away from the final scene, carrying an object of uncertain nature in her hand. This is outlined in dark blue with red bands at one end.

The tenth and last group, occupying the greater part of the lower tier of pictures, is a spirited scene of horse stealing. A man in the varicolored robe before mentioned and mounted on a yellow horse, possibly the same yellow horse which was stolen in group three, stampedes six horses, doubtless those of the enemy. Of these, two are solid dark blue, one solid red, two light blue and white and one red and white, surely an impressionist cavalcade.

The Murray Crow collection contains a large number of implements and personal possessions of Crow men and women, such as grinding stones, bone mashers, berry mashers, spoons and cups of buffalo horn, flint and steel, awls, fleshing tools, wooden bowls, gambling games, ice tops, saddles, whips, ropes, parfleches, saddle bags, knife sheaths, and other rawhide bags, quivers, bow cases, combs, sprinklers, pipe bags, fans, belts, armlets, roaches, rattles, whistles, necklaces and other objects. The more utilitarian objects are plain and unornamented, but all in any degree susceptible of embellishment are decorated, the rawhide objects with painting, the others with beadwork and quillwork, ribbons and such adornment.

Typical of these miscellaneous objects are two illustrated on page 401. One is a paint bag, a small pouch of buckskin with decorative fringe, ornamented with parallel horizontal bands of beads. It contains red ocher with which much of Indian painting was done. The other dainty object is a stick for painting the parting in a woman's hair, with its conical beaded sheath. The end of the handle is carved with a really excellent and most naturalistic head of an animal, apparently a mountain goat.

Large tobacco pipes with bowls made of the stone known as catlinite are typical of practically all the Plains tribes, although the stone is found in only one place, which takes its name from that fact—Pipestone, in Pipestone County, southwestern Minnesota. The name catlinite was given to it in honor of one of the first artists to visit, describe and paint our western Indians, George Catlin. It

was he who first brought the stone to the attention of mineralogists who pronounce it a fine grained, reddish, argillaceous sediment. It is soft when first quarried, and easily worked with primitive tools, but later hardens to a requisite firmness. The ledge in which it occurs is found in a stream bed and the stratum is only ten to twenty inches in thickness, the finest grade of the stone being found only in the medial three to four inches, conditions which made aboriginal quarrying quite difficult. Tradition holds that this quarry was neutral ground to which all tribes might come, but since definite knowledge on the topic has been possible, it has always been in the possession of the Sioux, who guarded it strictly. Naturally, as soon as the region became settled and the demand for the material was realized, exploitation began on a large scale and the manufacture, not only of tobacco pipe bowls, but of trinkets and ornaments of all kinds from catlinite began. Probably very few pipes have been made of catlinite by the Indians in the last sixty years.

The tobacco pipe secured in the Crow collection and reproduced on page 405 answers this description. While used by the Crow, it was probably manufactured by whites for Indian trade, that is to say, the bowl at least. This is carved in the rude form of a hatchet and inlaid with lead in simple geometric designs. The stem is of cylindrical shape, made of wood and probably of native manufacture, the surface decorated with burnt impressions from a red hot file.

The tomahawk pipe is another article which, while most popular among the Indians, to whom its use was restricted, was made, the steel head at least, in factories for the Indian trade. The primitive warrior carried a heavy stone club and, on occasions, an equally heavy stone pipe. He therefore jumped at the opportunity to secure an implement which combined the virtues of both and was lighter and more wieldy than either. Tomahawk pipes were supplied in quantities by the European colonizing nations, Spain, France and England, to their Indian allies. The bowl or poll is small and acorn shaped, with a hole in the base which normally is connected with a tube drilled through the length of the wooden handle. The Crow specimen figured on page 405, however, was utilized solely as a tomahawk; the handle is a typical hatchet handle, probably factory made, and not drilled, so that it cannot be used as a pipe. It is decorated with a long strip of mink fur wound spirally around it.

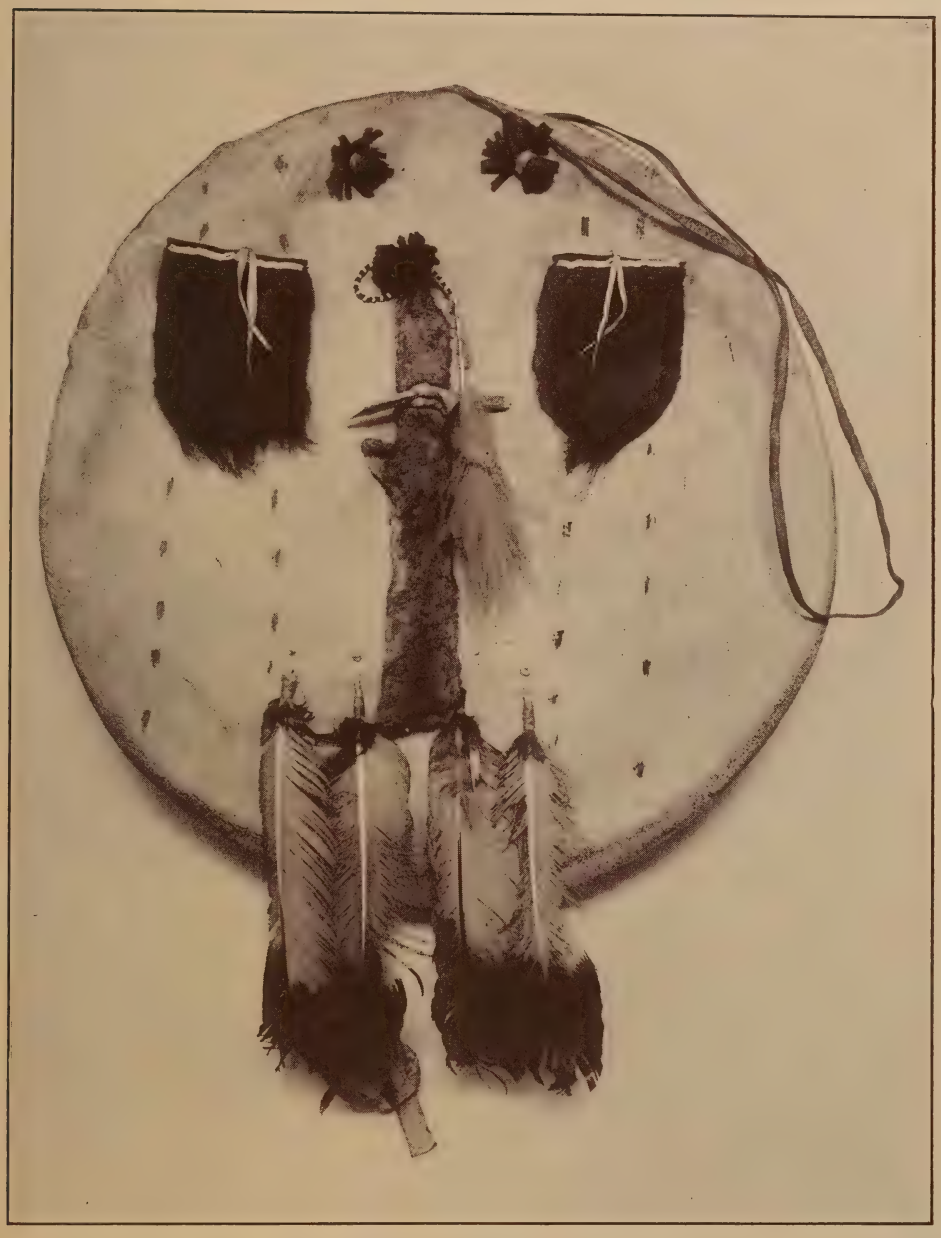
Warfare, as with most of the Prairie Indians, was the primary interest of the Crow man. Like the crusaders and knights of old,

Catlinite Tobacco Pipe and Pipe Tomahawk of Crow Indians.

war supplied him with the opportunity for competition with and honors from his fellow tribesmen. As in all such communities, a complicated system of orders, honors and insignia grew up, based on prowess in battle. Four primary honors were essential to full rank and recognition—capturing a tethered horse, taking a gun from an enemy, striking or "counting coup" on an enemy, and finally, as a climax to all, leading a successful war party. A man who had taken an honor was known as a "Good Young Man," but no matter how many honors of one or more kinds he had taken, he could not be known as a "Good Man" until he had at least one honor of each kind. Various insignia were worn with varying details which indicated something of the circumstances of the act. The chief, naturally, was the one who could lay claim to the most honors or to those performed under the most dangerous conditions.

Scalping, regarded by most of us as probably the most typical and widespread of all Indian customs, appears, according to historical research, to have been originally characteristic of only a small portion of the country here in the east and southeast, the more typical Indian custom having been to sever the head of the fallen foe. The custom of scalping appears to have spread throughout the country, due to its encouragement by colonial and federal authorities who frequently offered bounties to friendly tribes for scalps of hostile Indians, just as western states today pay bounties for scalps of wolves, coyotes and other such "vermin." For instance, in 1764, Governor John Penn, of this state, the grandson of "Miquon," the Friend, proclaimed the following bounties: For every male Indian (enemy ?) above the age of ten years captured, $150; killed and scalped, $134; for every Indian female enemy and every male under the age of ten years captured, $130; for every female above the age of ten years killed and scalped, $50. Such bounties for Indian scalps I understand to have been officially offered as late as 1860.

The scalp, of course, was a trophy, the emblem of victory, and as such was treated ceremonially. While the number of scalps taken naturally increased a man's prestige, the taking of one was not considered an honor, as were the four deeds mentioned above. Nevertheless, scalps were ordinarily taken, paraded on victorious occasions and attached as ornaments to the victor's garments. Several scalps were secured in the present Crow collection, one of which is figured on page 401. It has been fastened to a base of cloth and decorated with small metal disks and a wheel from the works of a watch, and surrounded by a beaded circle.



Crow Indian Shield with "Medicine" Decoration.

The question of shields has been thoroughly considered and discussed by Mr. Hall in a recent article in this JOURNAL and need be treated only in its special aspects here. The Crow shield was, as everywhere on the Plains, a circular target made of buffalo hide, taken from the ventral-thoracic part of an old bull. It was cut to twice the necessary size and smoked and shrunk over a fire in the ground while glue made from boiled hoofs and hides was poured over it. As the shield was a most sacred and magical object, this process of shrinking was accompanied by appropriate ceremonies. The covers for the shield were then prepared of soft tanned buckskin, frequently an outer and an inner cover. The true potency of the shield was ascribed, however, not so much to the protection secured by the thickness of the hide as to that afforded by the emblem painted on the shield. This was occasionally done on the shield itself, but more often on one or both of the covers. The design was the personal "medicine" of the owner which was revealed to him in a vision, and this "medicine" was the powerful emblem which protected him in battle. So deeply was this sentiment ingrained that, when the warpath was a long and arduous one, miniature shields with the same "medicine" were carried which, it was believed, afforded equal protection. One of these miniature shields was secured in the present Crow collection. On the warpath the shield—the actual shield, not the miniature—was carried by a younger man who bore no arms. It was never allowed to touch the ground, but hung on a branch whenever the party halted. If the shield was never captured, on point of death its owner would bequeath it to his son or another young man and so it would be inherited through several generations.

The Crow shield acquired with the Murray collection is probably very typical of such objects. It is a circular piece of thick heavy buffalo hide with twin buckskin covers, the outer one decorated. As it was received, the face of the shield, that is, the side completely covered by the envelop, is concave, but it may be assumed that this has been reversed since it left its native owner, for such shields are always carried with their convex sides to the enemy in order to cause arrows and other missles to glance off. The covers are perforated in many places around their peripheries and thongs have been passed through these to serve as draw strings so that the covers may be pulled taut across the face and puckered in the back, leaving a small circular hole in the center where the thong which passes through the shield is held by the warrior.

Fossil Ammonite Decorated and Venerated as "Medicine" by Crow Indians.

The outer cover is decorated, as may be seen on page 407, with four eagle feathers at the bottom, to the base of each of which is attached a small dyed down feather, three of them red and one blue. Down the center of the shield hangs a stuffed weasel, probably the primary feature of the owner's "medicine." A short commercial woolen tassel is attached to its mouth, from which hangs a light white feather on the end of a string of beads. To either side are pocket shaped flaps of brown bison hide edged at the top with scalloped red cloth and twin parallel strings of white glass beads. At the top, symmetrically placed, are two small bunches or balls made of folded red strouding tied with wound strings of blue beads, the centers of which may possibly contain potent "medicines." To either side of the cover are two vertical lines of intermittent painted dashes, those to the right blue, those to the left red. Probably each of these apparently decorative elements has a deep esoteric signification connected with the owner's personal "medicine."

"Medicine" is the essence of the religion of the Crow, as of practically all the tribes of the Great Plains, if not of most of America. "Medicine" involves the belief in the potent magical power of certain tangible objects or of portrayals or representations, real or fanciful, of these objects. Every man possesses his own individual medicine, by help of which he is able to accomplish deeds and secure advantages which would otherwise be denied him. Naturally medicines differ greatly in potency and it is the great desire and aim of every man to secure a strong medicine. Medicines are almost always granted as a result of visions, dreams, in which the medicine is either presented to the dreamer or else plays a prominent and happy role in the vision. Such visions occasionally are vouchsafed to men unsought and under normal conditions, but more often they come as a result of great physical exhaustion or emotional strain. To the modern physician or psychologist this is a perfectly natural result of the physical or mental condition, but to the Indian the vision is granted as the recompense for the fasting, thirsting, self mortification, or other travail which he has sought and endured in order to secure it. A painting or other representation of the medicine is, as we have seen, generally placed upon the shield and other quasi-ceremonial possessions.

Another class of "medicine" to which great magical power is ascribed consists of objects, generally encountered quite by accident —although popular belief has it that they can be traced by a peculiar

odor they emit—of peculiar appearance or shape, most frequently displaying a resemblance, more or less vague, to some animal or other natural phenomenon. Most of these objects, naturally, are of stone. The Indian is not much more naive in this belief than many educated persons today. Every museum worker is constantly offered petrified horses' hoofs, impressions of hands or feet, Brobdignagian stone axes and a thousand and one other extraordinary objects which, much to the owner's disgust and disbelief, the expert is obliged to pronounce nothing more than stones or concretions which have formed or weathered to a peculiar form resembling something animate or artificial. The Indian, however, ascribes to it the same magical powers with which he endows the object which he believes it to represent. He carefully takes it, decorates it with ornaments, greases it, wraps it up with offerings to it and protects it carefully, unwrapping it and praying to it on certain occasions. In return, the medicine protects him and secures him long life, health, wealth, honors and whatever favors he may seek.

Certain medicines are supposed to be specifics for certain purposes.—Thus one figured on page 401 illustrates a "horse-stealing medicine." It is a baglike object of buckskin, completely sewn up so that it is impossible to ascertain what is inside. On the beaded exterior, however, is shown a rectangular conventionalized horse track. Tassels to which large glass beads are attached hang from the lower margin. The medicine, of course, is carried on the expedition to steal the enemy's horses and, if properly cared for and manipulated, brings success to the party. Medicines of many different types for many purposes were acquired with the Crow collection.

The medicines which are in most general use, however, are those known as rock medicines, the central feature of which is one of these peculiar stones to which various decorations have been attached. These ornaments range from few and simple to most elaborate. The entire ensemble is carefully bound up in several thicknesses of fine cloth or buckskin and kept in a large rawhide bag. They are taken out, displayed and prayed to at certain ceremonies and the popular belief is that they multiply and produce offspring. The rock medicines are never sold to other members of the tribe but are always inherited.

A large number of rock medicines was secured in the Murray Crow Collection, two of the largest of which are reproduced on pages 409 and 412. Each was kept in a large painted bag, one being

Large "Rock Medicine" of Crow Indians.

bound in a large piece of soft tanned buckskin, the other in several pieces of silk or other soft cloth. Each is about twenty two inches in length.

In each of the medicines, as in a large number if not the majority of Crow rock medicines secured, the central figure is a fossil, apparently an ammonite, though of different species. It is perfectly natural that these fossils, stones of regular and symmetrical shapes, often with the iridescence of the shell still remaining, should appeal as magical objects of the greatest potency to the uneducated Crow who, of course, never dreamed that they were the remains of animals of bygone ages. The lower part of both of these fossils has been encased in an envelope of matted or felted wool, probably brown buffalo calf hair, to which the many decorations are attached by means of buckskin thongs. These are of varied natures, some purely decorative, others probably partly at least in the nature of offerings to the medicine, while yet others are probably themselves medicines of minor nature, possibly also revealed in visions or found under peculiar conditions.

The larger rock medicine is chipped in several places and is entirely covered with a coating of red ocher so that its nature is somewhat obscure, but it is apparently a fragment of a large ammonite. Around the base is a strip of mink skin to which, and to the felted bison wool, are attached the following objects: small colored glass beads, large old painted beads, dentalium shells, small univalve mollusc shells, buttons, bits of abalone shell, two large shell disks, beans and seeds, sections of cane, strips of red flannel, feathers, wings and tails of eagles, hawks and other birds, eagle claws, foot of hawk, hollow bird bone, stuffed weasel, feet of small mammal, crumpled cow's horn, strand of hair from horse's mane, deer dew-claws, rabbit's feet, kid's hoof and many strips of fur and rabbit's skin.

The fundamental feature of the smaller rock medicine is a beautiful and unusually perfect small ammonite with iridescent exterior, thin and discoidal, with a small natural perforation in the center through which the felted covering is held on. The decorative ornaments and auxiliary medicines which are attached to it are, on the whole, quite similar to those of the preceding and differ so slightly in detail that but little comment need be made on them. The absence of the large shell disks and the presence of several stuffed birds account for the larger part of the variation.

The illustration on the opposite page shows an old carved ivory object, now in this Museum, from Great Benin, the famous Negro city and kingdom in West Africa. The entire height of the carving is 7½ inches and it represents a group of five figures supporting on their heads an ornamented cup or holder. In the front of the picture is seen the principal personage in the group of five. He is the King of Benin, wearing a headdress with a conventional catfish depending on each side. This device identifies the King with Olokun, the Water God and principal deity of Benin. Suspended from his neck the Olokun King wears a cross, the meaning of which is uncertain, but which recalls a legend current in Benin in the 16th century to the effect that the King was invested with a cross and staff by a Suzerain whose realm was situated at a distance in northeastern Africa. He stands between two officials whose duty it was to support the arms of the King of Benin on the rare occasions when he appeared in public. Of the other two attendants of the King, one is a warrior and the other evidently a court official.

The accompanying article gives a detailed account of the characters and the design of the carving on this remarkable standing cup. An expansion of this design is shown in the coloured drawing reproduced herewith.

Ivory Standing cup or Stand. Benin.

AN IVORY STANDING CUP FROM BENIN

By H. U. Hall

THE Museum has lately acquired a very interesting ivory carving from Benin in the form of a standing cup, or, more probably, a stand for some round-bottomed or ovoid object. It is carved from the hollow part of a large tusk, so that not only its lower portion is naturally hollow, but there is also an opening in the bottom of the cuplike portion which represents the here rapidly diminishing natural cavity of the tusk. This opening may perhaps have been plugged when the vessel was in use, but no trace now remains of such stoppage; and the interior of the bowl shows evidence of polishing as if by friction from some solid object which it may have been used to hold. I suggest that it was used as a receptacle for the egg-shaped objects which sometimes appear in standing cups in the hands of individuals on the bronze plaques. Such objects, made of chalk or pipeclay, were commonly used in Bini ritual or magic, and would probably balance better in a cup with a hole in the bottom than in one made for the reception of liquids.[1]

Several elaborate ivory standing cups are in existence, made by Bini craftsmen for, and no doubt under the supervision of, Europeans in the 16th century. This cup, so to call it for convenience' sake, may be classed with the few smaller and simpler examples in purer native style which are known and which date probably from the same period. Its closest resemblances are with two British Museum cups figured by Read and Dalton as Plate II, Fig. 5, and Plate IV, Fig. 1, in the album of Benin antiquities just referred to.

The bowl of the cup figured here is hemispherical. It is divided into two zones by a narrow undecorated band or ridge; similar bands surround the rim and the bottom of the bowl. The upper zone is filled with a continuous guilloche in low relief; the lower is scored with rather deep, firmly executed incisions forming a basket weave pattern. The bowl is supported by five human figures which though carved in the round are carried out rather in the manner of a relief. The backs of the figures have retained the natural concavity of the hollow tusk, and the weapons or implements held in the hands of the figures are only finished on their anterior faces; with the exception

[1] C. H. Read and O. M. Dalton, Antiquities from the City of Benin, Pl. XXVIII, Figs. 1 and 5. Cf. Museum Journal, September, 1924, p. 193.

of the long spear or staff held by one of the figures, in which case there is a halfhearted attempt to continue the simple linear decoration on one of the three remaining sides of the two raised bands. The fingers of the right hand of this individual, also, are represented on one side of the staff, while the details of limbs and extremities and the other features of the remaining figures are all modelled on the anterior surface only. Where the body cicatrization, or scar tattoo, characteristic of the Bini is put in at all, only three of the five long lines which should, typically, score the trunk are represented; the two which run, normally, from armpit to hip are omitted. On the other hand, the pleats of the loin cloths are duly put in at the sides as well as in front.

The whole treatment of the figures is somewhat diagrammatic, but the simplification has not gone so far as to make the style anything but purely Bini. The modelling of the facial features and the trick by which the thumb is made a continuation of the forearm, in the same line or at a more or less considerable angle to it according to the position of the limb, would by themselves be sufficient to stamp the cup as a product of Benin if no other characteristic marks were there.

Such characters are conspicuously in evidence. The three short vertical cicatrizations over each eyebrow of each figure combined with the body markings, even though these latter are cut down from five to three as a concession to the convention by which the carver has chosen to bind himself, are a Bini tribal mark. The close association of two catfishes with the head of the principal personage of the group which supports the bowl, together with his wearing of a simple roundabout waist cloth; the similar garments of the two supporters of this personage; the difference between that of the independent figure with staff or pike and battleaxe and these other waist cloths; the guilloche of the brim and base of the vessel combined with the basketry design of the lower zone of the bowl; all these are features or combinations of features which are unmistakably Bini.

One figure, whom we have just had occasion to distinguish by his costume, stands alone. His garment is that which is typical for Bini men as represented on the carvings and bronzes. It consists usually, as here, of two loin cloths so put on that the upper one opens at the left side, where it is held, sometimes, as here, under a belt or sash, by a knot, one of the ends of which was by some means unknown to us stiffened so as to stand up often as high as the shoulder of the

wearer. It is rather singular that this striking peculiarity of costume seems to have escaped the attention of, I believe, all but one of the early European observers of Bini manners; and he, if indeed his remark can be taken to refer to the Bini proper, only in a manner not quite unequivocal speaks of "a cunning knot under the arms" by which the cloth is fastened.[1] Under this was worn another cloth, fastened on the right hip, so that both right and left flank and thigh were covered. The individual pictured here has only a moderate upward extension of the knotted corner of his upper loin cloth; the silence of the writers on Benin on this point from the 15th century onwards suggests that the fashion as depicted in the native art is an exaggerated stylization.[2]

The rest of his costume is scanty. In common with the two figures on his left he wears what appears to be a close-fitting cap or hood which covers the back of his head and neck and seems to be fastened under his chin. Except that it does not cover the forehead it recalls the head portion of the closely fitting hood attached to a short cape which was worn in Europe in the fifteenth and sixteenth centuries. Attached to it in front and hanging down the middle of the body are two strips of cloth, presumably, which pass into, or from which depends, a rectangular ornament, from the bottom of which, in turn, there hangs another object of similar shape. A plaque figure of a European which appears in Von Luschan's *Altertümer* on page 44 shows a similar arrangement except that in this the strips, of whatever material, are held together by the left hand of the wearer. On this person's head is a cylindrical hat with a narrow brim of a pattern which, as Von Luschan shows from a drawing by Dürer, was worn by Europeans in the early 16th century, and which appears several times on the heads of Europeans on the Benin plaques. Von Luschan considers the side pieces of what I have called conjecturally a hood, together with these long strips, to be simply hat strings ("Sturmband") and remarks that they are represented by a misunderstanding as brought close together under the chin while there is no visible means by which they are held there.[3] This criticism is not necessarily valid, as we shall see presently, even if hat strings are represented; and if they are cords passed into the hem of a hood and intended to draw it close, the holes

[1] H. Ling Roth, Great Benin, p. 24, footnote.
[2] Cf. F. von Luschan, Die Altertümer von Benin, p. 66. Berlin and Leipzig, 1919.
[3] Op. cit., pp. 44, 47; Figs. 48, 53–55.

by which they would pass out of the hem, close together, might very well seem too inconspicuous to the sculptor to be represented on carvings or bronzes of reduced size. In this case the flat objects into which the cords pass might be regarded as clasps intended to keep the ends of the strings together, the upper of which could be pushed up to the chin if it were desired to draw the hood closer. In any case the combination of cylindrical narrow-brimmed hat, though with the slope of the sides somewhat more marked, with hat strings or hood, in the cup figure here, is quite sufficient to relate it to the plaque figures of Von Luschan, and to show its connection, like theirs, with a European fashion of four hundred years ago introduced into West Africa, probably by the Portuguese, the first Europeans known to have reached those parts, and transferred by them to negro imitators. Of this transference our cup figure and his two neighbours on the left are witnesses.

The central figure of three on a bronze plaque which appears as Fig. 6 on Plate XXI of Read and Dalton's album wears a head-dress which shows that, in some cases at least, hat cords were worn by the Bini of the early sixteenth century. It also helps to explain what Von Luschan considers a misunderstanding on the part of Bini craftsmen. The cord attached to what is evidently the European morion worn by this negro is quite thick and would presumably be rather stiff and intractable. Its ends are attached to the morion so that it forms a loop hanging in front of the chest of the wearer. Over this has been slipped a clasp which confines the portion of the cord thus doubled, and though this clasp has been pushed up as far as it will go, it fails to bring the two portions of the cord, which, above, follow the contour of the face quite closely, snugly together. This is the condition which in Von Luschan's examples the artist has, rather characteristically, exaggerated.

It is possible that the flat objects through which the strings pass, or which are suspended on the strings, may be intended to represent bells such as were worn hanging on the breast by persons of importance. Such bells were usually rectangular in cross section and were narrower at the top than at the bottom, which is the case with all save one of these ornaments worn by the three cup figures in question. As the bells were of metal and fairly heavy they might, in this case, serve a practical as well as a decorative (and possibly magical) purpose by keeping the hood strings drawn. I know of at least two instances in which two bells were worn, one above the

other, though not suspended, it is true, by the same string.[1] This is in the case of two figures of warriors, on a socketlike bronze object in the Berlin Ethnological Museum. The lower of the two bells is of the long, conical, partly rounded kind figured by Webster, one an actual example, the other a representation on a small plaque.[2]

The isolated figure to whom allusion has hitherto been principally made, is also a warrior; he holds in his right hand a pike or spear, of a kind which, even when allowance is made for simplification, has no exact counterpart, so far as I know, among Bini weapons, and in his left a battleaxe with its butt carved into the semblance of a human hand. The latter weapon is also, to my knowledge, unrepresented by any other example in the Benin arsenal. The hand, as an appendage to apparently unrelated objects and forms, notably in a class of staves said to represent ancestors, occurs frequently in Benin wood carvings and bronzes.

Two lines only of the body scarmarkings of this individual are shown. The upper four fifths of the central one would be concealed by the pendent ornaments, the short remainder is, probably with that excuse, omitted. The two outside scorings are, for a reason already referred to, omitted altogether. The same is true of the two figures next in order on his left, whose bodies from the waist upwards, inclusive of the head, are accoutred in an identical manner.

Their costume, equipment, and attitude differ from those of the former individual, however, in several details. The second figure from his left supports with his left hand the right arm of the principal personage of the group, whose right hand is placed on the former's left. This definitely assigns to him the same function as the individual on the left of this important personage; they are the arm supporters of the god or half god who ruled in the sacred city of Benin. The rôle of the first figure on the left of the warrior first described is not so clear. The fact that he holds in his right hand a particularly serviceable looking club may indicate that he too is a fighting man; on the other hand his closer association is not with his military neighbour on his right but with the court official on his left: with his left hand he assists the latter to hold aloft a spindle-shaped truncheon which has some unexplained association with the office of arm supporter. It is borne by these functionaries also in two groups on an ivory cup in the Berlin Museum, in one of which

[1] Op. cit., p. 322, Fig. 468.

[2] Catalogue 29, Nos. 46 and 91.

EXTENSION OF DESIGN OF CARVED IVORY CUP FROM BENIN. ABOUT ⅔ SIZE.

groups they support the same personage who is represented here though not with identical attributes, and in the other the queen mother.[1] King, queen mother, and commander in chief of the army in Benin, were attended by arm supporters; the individual first described, who is not directly connected with the group formed by the other four figures, may be the "captain of war" represented without supporters.

These two cup figures wear a pleated waist cloth supported by a belt. It is in other respects quite simple and the opening is, unlike the upper cloth of the warrior on their right, not visible. The obvious inference is that it opens behind. This fact relates it directly to the women's cloth, which, according to Nyendael (late 17th century), sometimes was fastened at the back. The second supporter, on the other side, of the principal personage here represented also wears a cloth of this description, as does that personage himself.

Now this second arm supporter is a rather enigmatic figure. The upper part of the body is unencumbered save for a necklace of large diameter resting on the shoulders. It is possible that this is so through the deliberate purpose of the artist and that he had one or both of two objects in view, viz. the revealing of the sex of this individual or a more nearly perfect exhibition of the body cicatrization. It is true that the bosoms of men in Bini ivories and bronzes are often quite opulent in their modelling, but it is rather remarkable in this instance that although the chests of the other individuals are sufficiently bare to permit an indication of breasts, on this figure alone should these be shown and that with a clearness rather conspicuous when also the general schematic nature of the execution of the whole is considered. Is this a woman and of such importance that the other members of her company are constrained to adopt in compliment to her the woman's cloth? This is not likely. On the other hand, the presence of a woman, if this be one, in this triad is, so far as I know, without parallel among known objects of Bini art and yet is not without an echo, as we shall see, in the facts concerning these individuals so far as we know them.

The central figure of the triad has hitherto been known, chiefly on account of the close association of the catfish with him in his representations on the tusks and bronzes, as "catfish man," "fetish king," "catfish god," and, in a special sense of the epithet, as a "de-

[1] Von Luschan, op. cit., Fig. 825.

monic being," where "demonic" means, presumably, very much the same as spiritual, supernatural. In his most typical form catfishes take the place of his legs and his most constant attributes, aside from the catfish, are the crocodile and the python. Thus he appears with a crocodile issuing and depending from each side of the crown of his head, and two pythons, one at each side, either form a part of his girdle or issue from his flanks through the girdle, while a third python issues from between his catfish legs; or a catfish takes the place of his headdress, two others form his legs, and two serpents depend from his flanks; or, the other attributes being the same as in the first case, a crocodile appears between the legs; or he has human legs, a catfish on his head, two in a position corresponding to that of the more usual pair of pythons, and two held aloft in his hands.[1] The close association of the creatures represented by these attributes with the individual from whose body they proceed or form a part of makes certain his identification with the personage of our cup from whose head the most constant attribute of Von Luschan's "demonic being" proceeds, although this is the only example I know of in which the catfishes are placed in this position. However, in *Great Benin*, H. Ling Roth figured an ivory bracelet the carving of which includes a human figure with a python issuing from each side of his head; we have seen that crocodiles are thus represented; and this figure then completes the list of "demonic" attributes so placed. The figure appears sometimes without supporters.

In the work from which I have several times quoted in this article, but which I had not had the opportunity of seeing when the notes on some of the most important objects from Benin in the University Museum appeared in the Museum Journal four years ago, Von Luschan published, with some reserve, a statement which had been obtained from Eduboa, the last independent king of Benin, who was deposed by England in 1897. The communication was not received directly, but through a friend of the Berlin Museum, who, being in Africa, had an opportunity to question the ex-king. Eduboa "gave the native name olokum for the slender catfish and at the same time asserted that it was a 'god.' He gave the same name for the man having catfishes for legs. To the two attendants beside the god he assigned the names osanobuwa and obieme."[2] In

[1] See Von Luschan, op. cit., Figs. 739, 740, 741, 742, 743, 744; Read and Dalton, Pl. VII, Fig. 2, p. 15; H. Ling Roth, Great Benin, Fig. 226; Museum Journal, June, 1922.

[2] Von Luschan, p. 275.

the Index, under Olokum, we find: "The man (or 'god') who carries catfish or has them for legs."

Concerning information received from this source, which is also cited on two other points at least, Von Luschan remarks that he is inclined to believe that Eduboa was giving such answers to his interlocutor as he supposed the latter expected or wished to receive.[1] While this is a form of politeness from which observers and recorders of the customs of strange peoples have often, even unknowingly, suffered much, and while Von Luschan's strictures may, on the whole, be justified, there is no reason to suspect the putting of a leading question in this case, since nobody knew what, in this connection, to lead up to. Also, however faulty his knowledge concerning other matters, Eduboa may reasonably be supposed to have had correct knowledge of the identity of the most important personage represented on objects, such as the carved tusks, which were closely connected with the ancestral cults of his own family; so that a simple statement like this, involving no interpretation, may well be accepted at its face value.

What, besides Eduboa's statement, do we know of Olokum? The facts known directly or by inference concerning him from Bini tradition and from that of the Yoruba from whom Benin received its dynasty and many elements of custom, government, and religion will not take long to set down, though the implications of these facts lead into bypaths which cannot all be traced here.

A few words must first be said as to the forms of the names, as Eduboa's interviewer heard them. Von Luschan will not vouch for the exact correctness of the phonetic representation of these as it was transmitted to him; but a survey of the Bini Olympus reveals three divinities who only could possibly be intended by the names, which, however, do not quite agree in spelling with the hitherto accepted forms. They are respectively those of a god, or demigod, whose name Dennett spells Olukun and Thomas, apparently more correctly, Olokun; of the high, apparently rather indifferent and otiose god of the Bini, who appears in the literature as Osa, Osalubwa, Osalobwa, Osalobua, and Osalobula; and of a deity of ambiguous sex, who is only known to me from Thomas's brief notes concerning him (her) as Obiame.[2] As to the forms Osanobwa—Osalobwa which

[1] Von Luschan, pp. 223, 265.

[2] N. W. Thomas, Anthropological Report on the Edo-Speaking Peoples of Nigeria, Index to Vol. I; R. E. Dennett, Nigerian Studies, London, 1910, p. 10; R. E. Dennett, At the Back of the Black Man's Mind, London, 1906, passim.

provide the only marked difference in consonants, Thomas, who himself furnishes the last three varieties of Osa's name, remarks that cerebral *n* and cerebral *l* are almost indistinguishable;[1] and according to Ellis *n* and *l* are interchangeable among the Yoruba,[2] who speak a language distinct from that of the Bini, though the latter have borrowed divinities, name and all, from them.

Both in Yoruba and in Benin or Edo several divinities are identified with rivers. Thus, Dennett says that Olukun is the Benin River, which forms the southern boundary of the kingdom.[3] Thomas[4] tells us that he is a sea or river god, and in his Edo vocabulary gives the meaning of the word *olokun* as sea, the god *Olokun*, west. His emblems are pots containing water, pieces of chalk, peeled rods and white cloth, says Thomas; while from Dennett we learn that his "sign" is a pot of water, that his altar is to be found in every great house, and on or near this are placed a pot of water, a fringe of small leaves, stones in a small earthenware pot, chalk cones, fishbones, etc.[3] The water and the fishbones are particularly significant, and the chalk cones are no doubt the same objects which Cyril Punch saw among other offerings placed on the fetish altars along the road between Benin town and Gwato, the outpost of Benin's power toward the sea during the last two centuries; these things were "egg-shaped objects made of white substance, probably kaolin or pipeclay,[5] and were perhaps the ovoid articles borne in processions referred to here in connection with the probable use to which our cup was put. Is it extravagant to suggest that the undoubted connection of this cup with Olokun worship gives added probability to this explanation?

Of the use to which the chalk was put we learn from Dennett[3] that this was closely related to the cult of Olokun. He describes a temple to Olokun at Ewesi, where chalk is given to people who "put it round their eyes and on their bodies" "as a protection against evil." Worshippers, of both sexes, kneel and touch with their heads the step on which the feet of the image of Olokun rest. "An old priest" in charge here gives them the chalk to mark themselves with. A passage from Burton, quoted by Ling Roth,[6] throws some further

[1] Thomas, Edo II, p. 134.
[2] A. B. Ellis, The Yoruba-Speaking Peoples, p. 36.
[3] At the Back of the Black Man's Mind, p. 222 ff.
[4] Edo I, p. 32.
[5] Great Benin, p. 57.
[6] Great Benin, pp. 61, 62.

light on this practice. The leader of Burton's "boys," native servants and porters, brought with him on the road to Benin "a little daughter and two wives; these ladies began by decorating their foreheads and bosoms with chalk, picked from the roadside fetish-house and made into a paste with water in the palm. It is a prophylactic against the works of the enemy." "Almost every turn of the road showed some sign, a suspended calico cloth, a pot of water, or a heap of chalk sticks placed under . . . a pent roof." The pot of water, the chalk, and the white cloth seem to leave little room for doubt that these were shrines of Olokun; and the prophylactic chalk or pipeclay was evidently peculiarly associated with him as defender of the faithful against the powers of evil. Again, at Igo there is a mound with an altar to Olokun on which, under a shed, are placed chalk cones and cowries.[1]

At Ugwaton, or Gwato, there is a temple of this "great spirit or power" which was, according to Dennett, who, perhaps, is here only following an expression of opinion by Ling Roth, the same as one described by Burton in 1862. Burton took for a figure of the king an image which Dennett asserts to have been that of Olokun.[2]

In Ling Roth's book, the first compendium of the history and ethnography of Benin, there is no mention of Olokun by that name. He appears as Malaku. It was Dennett who revealed the identity of the two. Malaku, he says = Oma Olokun;[3] and from Thomas we learn that oma or ma means "good."[4] By Struck,[5] malaku is identified with a Yoruba word, moloku, the sea. It is clear enough from what we are told of Malaku in *Great Benin* that he is the same person as Olokun. He is "the spirit of big water, i. e., the sea, big rivers, not creeks" (C. Punch).[6] That Gwato is there named as the headquarters of his cult is probably simply due to the fact that nothing was then known of the particular gods worshipped in Benin city. There are two facts which seem to support the statement that Edo (Benin) was not the seat of his cult, but they are susceptible of another explanation. Esige, the king of Benin whom Bini tradition associates with the first Europeans who visited Benin and who may have reigned about the end of the fifteenth century,[7] is said to

[1] Dennett, l. c.
[2] Dennett, p. 225 and footnote; Ling Roth, p. 59.
[3] Dennett, p. 225, footnote.
[4] Edo II, Vocabulary.
[5] Zeitschrift für Ethnologie, 1922, p. 169.
[6] Ling Roth, p. 53.
[7] B. Struck, Chronologie der Benin-Altertümer, Zeitschrift für Ethnologie, 1923, pp. 127, 135.

have travelled from Gwato to Benin to be made king. Following a great flood "over all Benin" which took place during his reign, he drove the Malaku, who as god of great waters must have been responsible for the disaster, back to Gwatun, and confined him there, driving iron pins into the ground near the town to fix the limit beyond which he might not pass in the direction of Benin city.[1] Another tradition which appears on the face of it to mean that the cult of Olokun had been abolished in the sacred city of the kingdom of Edo is related by Dennett: "They say that Ehaizaai [or Ahezai], King of Benin, because it [a shrine of Olokun] was unhappy in Benin City, sent it to Igo. They say they knew it was unhappy because of the sickness it caused in the city."[2] Consideration of the first story in the light of the second shows, I think, what this apparent banishment of a god really means. It was not the deity in his generalized character, so to speak, who was banished, but a particular manifestation or personification of him in his shrine or image.

This differentiation of Olokuns accompanied by a sort of individualization of each manifestation of the god has a parallel in Yorubaland, which, as we have seen, was the original home of Bini kings and of Bini gods.[3] There an orisha or god who has given some special evidence of his power in a particular place acquires as a special epithet the name of that place, e. g., Shankpanna of Ilesha, and his fame may draw worshippers of Shankpanna from Oshogbo, who will say "Shankpanna of Ilesha is stronger than Shankpanna of Ologbo." They are the same Shankpanna ultimately, yet at the same time individuals since they have the power of performing separately acts differing in quality if not in kind. It is of course a phenomenon not unknown in lands and ages remote from modern Benin and Yorubaland.

It was at Gwato that travellers on their way to Benin were detained until they received permission from the sacred king to enter the sacred city. During the festivals which required the sacrifice of so many human beings, no stranger might enter Benin city, and it was the Malaku or Olokun of Gwato who saw to it that this rule was observed. During this period anyone going towards Benin from Gwato "would meet an old man walking towards Gwato with a bag over his shoulder. If he saluted the old man he received a

[1] C. Punch in Great Benin, pp. 54, 55.
[2] At the Back of the Black Man's Mind, pp. 224, 225.
[3] L. Frobenius, Und Afrika Sprach, I, p. 312.

polite reply, but, after passing, if he turned, he would see no one on the road, and then he would know he was doomed, and would in fact sicken and die within a few hours. . . . Along the roads are many little fetish altars, and passers-by deposit offerings of food, cowries, palm oil, fowl feathers, and above all egg-shaped objects made of white substance, probably kaolin. . . . The old man with the bag is supposed to be a spirit sent by Malaku, who collects in his bag all the offerings on the Gwato road and on arrival at Gwato disappears with his bag into the big water"[1] which was the domain of Olokun, identified, otherwise, with Olokun himself.

A seventeenth century writer tells us in this connection that the Bini "offer great yearly sacrifices to the sea, to dispose it favourably towards them, and their most sacred oaths are those made upon the sea and upon their king."[2] One hundred and fifty years later we are told that three or four human sacrifices were made annually at the mouth of the river as votive offerings to the sea.[3] From a writer of the 18th century we learn that "the seat of bliss or torment in the future life they imagine to be the sea."[4]

A short survey of Olokun's position in his old home, Yorubaland, will help to fill out our not very extensive knowledge of this interesting character. He is the great sea Orisha of the Yoruba. Orisha means god, or perhaps rather demigod, and is the equivalent of the Bini ebo. By Johnson, a native Yoruban, he is placed among other sea gods;[5] while Ellis, like Dennett, makes him the god, par excellence, of that element. From Dennett also we learn that he and his sister-wife Olosa are the orishas of fishermen, and from Ellis that Olosa supplies her votaries with fish; and with her husband turned the stars into fishes. Another wife, Olokun-su, in the harbour at Lagos, is part fish, the fish in the waters over the bar are sacred to her and must not be caught at the risk of the penalty of being drowned. Crocodiles are the messengers of Olosa and must not be molested.[6]

In Ife, whence, according to both Bini and Yoruba tradition, the dynasty of Benin was derived, Olokun, the sea, and Olorun, the sky, were coequal and existed together before the creation of

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[1] C. Punch, quoted by Ling Roth, p. 57.

[2] Dapper, quoted by Ling Roth, p. 53.

[3] Adams, in Ling Roth, p. 63.

[4] Nyendael, in Ling Roth, p. 52.

[5] In At the Back of the Black Man's Mind, Appendix, p. 245.

[6] Dennett, Nigerian Studies, pp. 144, 190; Ellis, The Yoruba-Speaking Peoples, pp. 76, 77, 83, 171.

Earth.[1] There is nothing in all this to support Thomas's assertion that "the cult of Olokun seems to be confined to the women";[2] the cult indeed is quite clearly of general and even supreme importance in Benin, no doubt through the connection with the royal house, and seems to have been of considerable importance in the Yoruba country. To the Yoruba Olokun human sacrifices were made as we have seen they were to him of Benin.[3]

A certain connection of Olokun with the kings of Benin was known before Eduboa's statement was published. One of the titles of the King was "offspring of Olokun."[4] Now that the figure with catfishes for legs, or with the catfish otherwise in close connection with his body, issuing from or forming a part of it, as in the case of the cup, is known to be a representation of the great sea god, we can see clearly the importance in regard to this connection of Dennett's other statements that "the Kings of Benin had to be supported under each arm by two chiefs whenever they attempted to walk, because they claimed to be descended from such a deity as mentioned by Barbot"—a god in the form of a fish—"and by way of proof they say that one of their kings, Ehenbuda by name, was born with legs with no bones in them."[5] The catfish god is Olokun; in his character of ancestor of the kings of Benin he appears in the carvings on the tusks which they regarded as representing their ancestors as a personage with catfish attributes. There seems to be little doubt that the particular species of fish represented is Malapterurus beninensis Murr., a creature known to be regarded with awe for its peculiar quality of being able to deliver an electric shock to anyone who takes hold of it; it would therefore be especially liable to association with the sea god and his descendant and representative.

Representative, of course, since the kingship was hereditary, and each successor was in this sense the representative of the family into which he was born. But there is a closer sense in which the king represented his great ancestor. To Bini as well as to Yoruba belief, children reincarnated their ancestors. We have evidence, however, of a more particular kind than this general inference. If the king of Benin was not somehow divine, even actually a renewed personification of Olokun, how could he have power superior to local

[1] Frobenius, p. 309.
[2] Edo I, p. 32.
[3] Ellis, p. 71; Dennett, Nigerian Studies, p. 110.
[4] Dennett, At the Back of the Black Man's Mind, p. 181.
[5] Nigerian Studies, p. 108.

Olokuns to the extent of banishing them from his city and confining them to their places of exile, as we have seen him do? In Yoruba, where Olokun's power does not seem to have been similarly associated with a royal house, it required another god to interfere with and avert the results of his activities. When, as in Benin, Olokun caused an inundation, it was Obatala, his grandfather, who forced him to return to his house and confined him there. According to another version of the story, Olokun, being angry with men, brought about a great flood, some survivors of which were saved by being drawn up into the sky by Obatala.[1]

There is, I think, little doubt that Von Luschan's "Malapterurus man" represents both Olokun in the character of king and the king in the character of Olokun. Although Struck represents Von Luschan as declaring that this composite being is not the king,[2] this is not in fact what Von Luschan says. His words are: "We cannot in this sense speak of the man with the electric catfishes in his varying incarnations simply as 'King.' He is in the first place a demonic being, and where he seems to encounter us as an earthly ruler, he is always at the same time demonic, with that intensification of natural and supernatural qualities which is just as characteristic for the king in tropical Africa as it was, for example, in the ancient East."[3]

It is not possible, in the present state of our knowledge, to explain the nature of the relation between the Olokun King and the three attributes which are most constantly and closely associated with him—the catfish, the crocodile, and the python. They are all, as creatures either amphibious or constantly living in the water, naturally associated with the god of the sea and of large bodies of water. The peculiar fitness of the association with the catfish has been pointed out and we have seen that the closeness of this association was such that the catfish itself as well as the catfish man bore the name of the god. Of his wife Olosa, if not of Olokun himself, we have seen that crocodiles were the servants. In view of the association of Olokun with Gwato on the Benin River some relation with a crocodile spirit which haunted the Benin River near Gwaton Creek may be suspected. It was in the form of "a huge alligator with a light in his head. The light would be seen at night by people in canoes and moored in the river, and offerings would thereupon be put into the water for the spirit lest it should come and break the

[1] Ellis, p. 71; Dennett, Nigerian Studies, p. 114.

[2] Struck, l. c.

[3] Von Luschan, p. 94.

canoe."[1] Perhaps this was a part of the spirit organization in charge of the Olokun of Gwato for preserving the sacred isolation of Benin City, of which we have already seen another element in the old man with a bag on the Gwato-Benin road. A great python of bronze guarded the king's quarters in Benin,[2] and pythons and a crocodile decorated the door of a shrine or temple of Olokun at Ewesi in the kingdom of Benin.[3] The cult of the python is connected with that of ancestors in Southern Nigeria.[4] All this illustrates well the closeness of the relation between Olokun, the King, and these three creatures, but fails to explain it satisfactorily.

I think that the hint contained in the last statement about the python, as well as in the tradition of the existence of a blood tie between Olokun and the king may be taken as suggesting a possible explanation.

In Yorubaland, which has supplied important elements to the social organization as well as to the religious conceptions of the kingdom of Benin, there had grown up a curious form of totemism which guided the exogamous marriage regulations, and which, at any rate in outline, appears again in Benin, where, as in Yoruba, it seems to have been linked with the worship of gods. Every Yoruban had an orisha or god, from whom, according to Frobenius, he believed himself descended and with the other descendants of whom he might not intermarry. From Dennett we learn that each individual had an orisha, and was also subject to three ewaws, or prohibitions, things from which he must refrain, such as the killing of a certain animal or animals, or using them or certain plants for food, or the commission of certain acts not always connected with animal or other food. According to Dennett's rather obscure account of the system, both orisha and ewaws were originally hereditary in continuous line, but are now subject to redistribution by the priests after continuing in the same paternal line for four generations. Frobenius says that the prohibitions pass on continuously in the paternal line.[5]

In Ife, from which town Yoruba and Bini traditions agree in deriving the migration which gave a dynasty and probably a ruling class to Benin, one of the exogamous groups still has Olokun for its

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[1] C. Punch quoted by Ling Roth, p. 90.

[2] See MUSEUM JOURNAL, June, 1922.

[3] At the Back of the Black Man's Mind, p. 223.

[4] Leonard, The Lower Niger, Chapter VI, Section VI.

[5] Frobenius, op. cit., pp. 165, 198–199, 307, 308; Dennett, Nigerian Studies, pp. 176–188. Cf. S. Johnson, The History of the Yorubas, pp. 85–87.

Orisha. In view of the close association of Olokun with the kings of Benin, it seems very likely that the founder of the Benin dynasty came from this group and brought his ancestral ewaws with him. Becoming king, though in a new land, he would, following Yoruba royal custom, be exempt from the laws regulating intermarriage—he would, indeed, almost necessarily, considering the large number of wives recorded for kings of Benin—but might retain the animals representing the ewaws of the family, catfish, python, and crocodile, the more so as the awesome properties associated with these creatures fitted them peculiarly for the rôle of attributes of a royal personage who ruled in a sacred city and was not merely hedged by but actually personified that divinity which proverbially attends a king. From both Dennett and Thomas we learn that a form of totemic exogamous regulations strikingly like those of the Yoruba obtained in the kingdom of Benin. The names given to the regulatory prohibitions, even, are of identical origin; and Thomas, who calls these awaigbe, or family awas (ewaws), believes that, as in Yoruba, they are associated with the cult of certain ebos, the gods or demigods of whom Olokun was as we have seen the most important in Benin, and which are the equivalent of the Yoruba orishas. The ebos, he says, appear to be the property of individual families.[1]

Besides Olokun, two other gods are represented among the personages of this cup, if we accept Eduboa's statement as applying literally to all members of this triad wherever it appears. These are Osanobwa and Obieme.

Osanobwa, Osalobwa, or more briefly Osa, is, according to Thomas, the chief god of the Edo or Bini, who resides in Elimi, or heaven, with the ebo or subordinate members of the pantheon. To Elimi go the dead and the sacrifices which are offered to them.[2]

Obieme, Obiame, appears to be a divinity of uncertain or ambiguous sex. Thomas, in whose Edo Report occur the only references, and those very brief, to Obiame which I know of, calls this ebo the "mother of all mankind, as her name indicates." On the other hand this personage appears in Elimi as one of the "kings of the dead," together with Olokun and others, in Osalobwa's house.[3] On the supposition that we have a goddess to deal with, perhaps she is represented by the figure the upper portion of whose body is bare,

[1] N. W. Thomas, Totemism in Southern Nigeria, Anthropos, 1915–1916, pp. 234, 235, 237; Edo I, pp. 61, 62; Dennett, At the Back of the Black Man's Mind, p. 231.

[2] Edo I, pp. 24, 25.

[3] Edo I, p. 32; II, p. 17.

who supports the left hand of Olokun, and the uncertainty of whose sex was referred to in the earlier part of this article.

Two difficulties occur here. As to the first—why should the high god of the Bini appear as arm supporter to a subordinate deity? —I can only suggest that as West African high gods are benevolent but usually rather inactive, and hence do not often require to be propitiated, they are likely to be somewhat neglected, certainly to be less regarded than those who are capable of doing harm, and may as here, perhaps, actually sink, at any rate on certain occasions, into a subordinate position.

The other difficulty is in accounting for a female as arm supporter to the Olokun King. It is natural to suppose that the supporters of the king's arms, in his divine character, would be analogous to the officials who performed that office for him in his civil capacity. These were men called nabori, nobles of the third rank, who belonged to what has been termed the department of equity in the administration of the kingdom. Either Obiame was not a goddess—the second element in the name, ame, may perhaps be connected with the word for water rather than with that meaning wife or mother—or there may have been occasions of which we know nothing when women performed the office of nabori.

The question of the form of the waist cloth is not decisive. Apparently one form of the cloth customarily worn by men, and certainly that worn by the Olokun King when he appears with the attributes with which we have been dealing, opened, like the women's, at the back. The pleats may be due to imitation of a particular form of kilt worn by Europeans in the sixteenth century, which usually appears as a part of the costume of the Europeans on the older Benin ivories and bronzes.

In Yorubaland there is a good deal of confusion of sex among the orishas, some of whom, among them Olokun himself, appear now as males and now as females.

It remains only to speak of the cross on the breast of Olokun. I believe that this cup affords the only known example of a figure having all or any of the unmistakable attributes of the ebo which is also furnished with one of the two forms of cross, the Greek, as here, or the cross patée, sometimes wrongly called Maltese, which are known in the art of Benin. The cross apparently reached Benin by two roads, only one of which led from Europe of the fifteenth or sixteenth century. It was not a decoration only of the king. Its significance to the Bini has not been satisfactorily explained.

MR. HENRY H. BONNELL

By the death of Mr. Henry H. Bonnell, which took place on November seventh, the Museum loses a devoted friend who was ever ready to advance its interests by his counsel and by his benefactions. Mr. Bonnell was graduated in the Class of 1880 from the University of Pennsylvania. For some years he was connected with the publishing house of Dodd, Mead & Co. of New York, but had long since retired from business, devoting himself quietly to the public service. He was elected a member of the Board of Managers of the Museum of the University of Pennsylvania in 1913. In that position of responsibility, from the time of his election until the date of his death, he was one of the most faithful and punctual in the performance of his duties. His generosity to the Museum and to the many other good causes in which he was interested will be well remembered by all of his former associates. His fine character and gentle nature, often the subjects of remark during his life, make his memory a peculiarly happy one.

Mr. Bonnell was widely travelled and a great reader. One of his chief interests was the collecting of books, for which he had a special talent and in which he exercised taste and judgment. As an author he has a permanent place in literature by virtue of his studies of the works of Charlotte Brontë, George Eliot and Jane Austen, and he will also be remembered by his metrical and lyrical compositions.

MUSEUM NOTES

APPOINTMENT.

At a stated meeting of the Board of Managers, held on October 15, General Harry C. Trexler was elected a Manager of the Museum to fill the vacancy caused by the resignation of Mr. Jacob S. Disston.

EXPEDITIONS.

The members of the Ur Expedition reached the ruins at the end of October and work was resumed in the excavations on the 1st day of November. The personnel of the Expedition for this year is as follows. Mr. C. Leonard Woolley, Director of Excavations; Mr. A. S. Whitburn, architect; Rev. Eric Burrows, cuneiformist; Mr. M. W. Mallowan, general archæological assistant; Mrs. Keeling, special assistant. As we go to press, the first monthly report for the season has been received from Mr. Woolley and the following abstract will serve to indicate the results of the first month's work.

"Our object was twofold, to secure more literary tablets, and to acquire knowledge of the conditions of domestic life at an early period, and in both respects we have been highly successful. Apart from scattered finds, three distinct hoards of tablets have come to light, and though it is too early in the day to say much about these, for when they first come out of the soil they are quite illegible and have to be baked in a furnace and then cleaned and mended before any study of them is possible and even then the study is a slow business, yet from a few examples, thirty or forty in all, which had been accidentally burnt in a fire which destroyed the building in which they were found and were therefore hard enough to be cleaned or partially cleaned forthwith, we may conclude that the discovery is of real importance. Instead of the business documents, receipts and contracts, which are commonly found on the site, these are all of a literary or scientific character; some are mathematical, and give lists of square and cube roots of all the numbers up to sixty; some are hymns; some record the pious foundation of early kings, important for the history and topography of the city; on one there seems to be mention of an unknown king of Ur, possibly one of the rulers of the Second Dynasty of which

we know no more than that it existed. If these are fair samples, then amongst the hundreds of tablets now being packed in sand for firing there should be literary material of the first class.

"Of more immediate interest are the houses in which the tablets were found. These date from just about the time when Abraham was living at Ur—they were first put up about 2100 B. C., and were inhabited, with various minor rebuildings and repairs, for some two hundred years,—and what strikes one at once is the high degree of comfort and even luxury to which the ruins bear witness. Two-storied buildings solidly constructed in burnt brick (some of the walls today stand fifteen and twenty feet high) were almost exactly like the best houses of modern Baghdad. There was a central court with a wooden gallery running round it onto which the upper rooms opened: the family lived above; on the ground floor were the reception room and the domestic offices, kitchens and servants' quarters: the rooms were lofty—in one case the brick staircase is preserved up to ten feet and was originally carried up higher in wood, so that the ground-floor rooms must have been twelve or fifteen feet high—and although all traces of decoration have gone and we have only the bare walls with occasionally a little mud plastering and whitewash, yet we can scarcely be wrong in supposing that the furnishing matched the excellence of the construction. It is the first time that private houses of the period have been discovered, and the discovery changes altogether our ideas of how men lived then; now we have a number of separate dwellings, forming blocks divided by rather narrow streets, the large houses of wealthy citizens cheek by jowl with the four or five-roomed homes of their poorer neighbours, and it is easy to repeople the ruined courts and chambers and to understand the surroundings of the men who once inhabited them and pored over the tables of cube roots? Only one room, —a long narrow chamber in No. 7 Quiet Street,—puzzled us altogether. It was a common custom to bury the dead under the houses in which they had lived, and often beneath the pavement we find clay coffins or vaulted brick tombs containing together with the body clay vessels of offerings, food for the journey to the next world, and perhaps the signet seal of the house owner. But this room was distinguished by having a niche in the end wall and in front of the niche a raised block of

brickwork like an altar, and all round this, under the pavement, there lay thick together nearly thirty big bowls containing the bones of little children. There was no Moloch in the Sumerian pantheon to demand infant sacrifice, yet it is hard to believe that within a comparatively short space of time and in a single household thirty babies should die a natural death: can we have here a domestic shrine dedicated to some deity kindly to children whereto friends or relatives might bring their little ones for burial? If so, there was in the Sumerian religion of Abraham's time a sentiment more intimately human than the texts would lead us to suppose."

The expedition to Beisan has been at work since the first of September and will bring the season's excavations to a close in January. About half of the season has been spent upon the cemetery and the other half upon the top of the acropolis. The results of this year's work will be presented in a later number of the JOURNAL. The members of the expedition during this season are: Mr. Alan Rowe, Director of Excavations; Mr. G. M. Fitzgerald, first assistant archæologist; Mr. S. Yeivan, second assistant archæologist; Mr. Charles Little, draughtsman; Mr. Terontieff, surveyor; Hassan Mahomad Effendi, artist; Mr. Cecil Haiat, secretary.

GIFTS.

Miss Sophia Cadwalader has presented to the Museum a pair of Egyptian vases of the 18th Dynasty, formerly in the MacGregor Collection. These vases, which are unusual in form, size and decoration, have been presented by Miss Cadwalader in memory of Mr. Eckley B. Coxe, Jr.

Mr. George Outhette has presented a small ethnological collection from Venezuela.

Mr. Eldridge R. Johnson has presented three jade carvings and one lapis lazuli carving made in the imperial workshop of Ch'ien Lung. These carvings will be described in the next number of the JOURNAL.

Mr. Eldridge R. F. Johnson has presented two Japanese ivory carvings, one representing a gardener and the other a crawfish.

Mr. Walter E. Hering has presented a pottery bowl from Costa Rica.

PURCHASES.

One large Chinese fresco in four sections from a mountain to the northwest of the village of Ching Hua in the Province of Honan. This fresco, which was described by Miss Fernald in the last number of the MUSEUM JOURNAL, is attributed to the T'ang Dynasty.

A Chinese pottery tablet from a tomb of the Han Dynasty.

In the Persian Section the following objects have been acquired.

Two pairs of painted wooden doors with fretted gold background on which medallions are painted in exquisite miniature technique. These doors, said to be from a Palace of Shah Abbas in Isfahan, are exquisite examples of 16th Century workmanship and are companion pieces to two pairs already in the Persian collection in the Museum.

A pair of carved wooden shrine doors. One of the inscribed panels gives the names of the donor and the carpenter and the date: 727 A. H. (1326 A. D.).

A fragment of painted wall surface from the same Palace of Shah Abbas at Isfahan.

A panel of four Damascus tiles with blue ground and Arabic inscription in white.

In the Egyptian Section the following objects have been acquired:

A limestone statuette of Queen Nefertiti.

A rose granite head of a Pharaoh found at Karnak.

A black granite head of Thothmes III (?).

A white stone sarcophagus with inscription.

A green basalt sarcophagus, inscribed.

A piece of granite relief from Sammanoud.

A Coptic vestment.

The collections in the Ethnological Section have been increased by the acquisition of twenty six ethnological specimens from the Soudan collected by Rev. Dr. David S. Oyler, a fine Marquesas club and a Soloman Island club.

LECTURES

During the winter months the Saturday and Sunday Courses of Lectures in the Auditorium of the Museum will be continued and on Tuesday afternoons the Docents will give Talks in the Galleries of the Museum.

Members' Course

Saturday Afternoons at 3 o'clock

January	8.	Roumanian Art and Architecture, by Prof. Charles Upson Clark
January	15.	Through Central Asia with the Roosevelts, by Mr. George K. Cherrie
January	22.	Burma, by Mr. Barnum Brown
January	29.	Isles Beneath Us—Tasmania, New Zealand, New Guinea, by Mr. Howard B. MacDonald
February	5.	Lecture to be announced
February	12.	The Rainbow Isles—Hawaii, by Mr. Fred Payne Clatworthy
February	19.	Lecture to be announced
February	26.	Peru and Bolivia, by Dr. Michail Dorizas
March	5.	By Air from Cape to Cairo, by Sir Alan Cobham
March	12.	Malta and Rhodes—When Knighthood was in Flower, by Dr. Bruno Roselli
March	19.	Across the Mysterious French Sudan to Timbuctu, by Sir Curtis Lampson
March	26.	Lecture to be announced

Public Lectures

Sunday Afternoons at 3.30 o'clock

January	9.	The Development and Art of Writing, by Miss E. G. Creaghead
January	16.	Voyages and Adventures of the Early Dutch Navigators, by Mrs. Walter Nowak
January	23.	Eternal Rome, by Mrs. Loring Dam
January	30.	The Persian Court at the Time of Queen Elizabeth of England, by Miss E. G. Creaghead
February	6.	Egyptian Pharaohs in the University Museum, by Mrs. Walter Nowak
February	13.	Ostia: Seaport of Ancient Rome, by Mrs. Loring Dam
February	20.	Discoveries of the Life of Prehistoric Man, by Miss E. G. Creaghead
February	27.	Marco Polo at the Court of Kublai Khan of China, by Mrs. Walter Nowak

March 6. Ur, the City of Abraham, by Dr. Leon Legrain
March 13. African Art as Inspiration for Modern Art, by Miss E. G. Creaghead
March 20. Some Chinese Painters of the Middle Ages, by Mrs. Walter Nowak
March 27. Hill Towns of Italy, by Mrs. Loring Dam

Gallery Talks

Tuesday Afternoons at 3.30 o'clock

January 11. The Origin and Development of Writing, by Miss E. G. Creaghead
January 18. Frivolities of Cretan Art, by Mrs. Walter Nowak
January 25. Roman Art, by Mrs. Loring Dam
February 1. Persian Art in the Middle Ages, by Miss E. G. Creaghead
February 8. Egyptian Portraiture, by Mrs. Walter Nowak
February 15. Character of the Eskimo, by Mrs. Loring Dam
February 22. Prehistoric Man, by Miss E. G. Creaghead
March 1. Mediæval Chinese Art, by Mrs. Walter Nowak
March 8. Temples of Babylonia, by Mrs. Loring Dam
March 15. Woodcarving of Africa and the South Seas, by Miss E. G. Creaghead
March 22. Chinese Painting, by Mrs. Walter Nowak
March 29. The Egyptian Tomb, by Mrs. Loring Dam

THE MUSEUM LIBRARY.

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Atlas Africanus, Volumes I, II, III
Buddhist Monuments in China, by Daijo Tokiwa and Todasi Sekino
L'Art Javanais Dans les Musées de Hollande et de Java, by N. J. Krom
A History of Persian Literature under Tartar Dominion, by Edward G. Browne
A History of Persian Literature in Modern Times, by Edward G. Browne

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In order that The University Museum may give appropriate recognition to the substantial gifts which have been already received, and which will hereafter be donated or bequeathed for the development of its resources and the extension of its usefulness, the Board of Managers have adopted the following classification for contributors and members, and have resolved that the names of the donors of aggregate sums of $25,000 and upwards, in cash, securities, or property shall be inscribed upon a suitable tablet or tablets, to be properly displayed in the Museum.

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